



Register your product and get support at
www.philips.com/welcome

DVDR3506/37

STOP! Thank you for choosing Philips.

Need help fast?

Read your Quick Start Guide and/or User Manual first for quick tips that make using your Philips product more enjoyable.

Register your product and get support at www.philips.com/welcome
 or call
1-888-PHILIPS (744-5477)
 while with your product
 (and Model / Serial number)

ARRÊT! Philips vous remercie de votre confiance.

Besoin d'une aide rapide?

Le Guide rapide de début et Manuel de l'utilisateur regorgent d'astuces destinées à simplifier l'utilisation de votre produit Philips.

Enregistrez votre produit et accédez à l'assistance sur www.philips.com/welcome
 ou formez le
1-800-661-6162 (Francophone)
1-888-PHILIPS (744-5477)
 (English speaking)
 Veillez à avoir votre produit à portée de main
 (et model / serial nombre)

ALTO! Gracias por escoger Philips

Necesita ayuda inmediata?

Lea primero la Guía rápida del comienzo o el Manual del usuario, en donde encontrará consejos que le ayudarán a disfrutar plenamente de su producto Philips.

Visite www.philips.com/welcome para registrar su producto y obtener información de contacto y asistencia.
 o llame al teléfono
1-888-PHILIPS (744-5477)
 y tenga a mano el producto
 (y número de model / serial)

EN DIGITAL VIDEO DISC RECORDER WITH DIGITAL TUNER



PHILIPS

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others



PRECAUTIONS

Return your Product Registration Card or register online at www.philips.com/welcome today to get the very most from your purchase.

Registering your model with PHILIPS makes you eligible for all of the valuable benefits listed below, so don't miss out. Complete and return your Product Registration Card at once, **or register online at www.philips.com/welcome** to ensure:

*Proof of Purchase

Returning the enclosed card guarantees that your date of purchase will be on file, so no additional paperwork will be required from you to obtain warranty service.

*Product Safety Notification

By registering your product, you'll receive notification - directly from the manufacturer - in the rare case of a product recall or safety defect.

*Additional Benefits

Registering your product guarantees that you'll receive all of the privileges to which you're entitled, including special money-saving offers.

PHILIPS

Congratulations on your purchase, and welcome to the "family!"

Dear PHILIPS product owner:

Thank you for your confidence in PHILIPS. You've selected one of the best-built, best-backed products available today. We'll do everything in our power to keep you happy with your purchase for many years to come.



As a member of the PHILIPS "family," you're entitled to protection by one of the most comprehensive warranties and outstanding service networks in the industry. What's more, your purchase guarantees you'll receive all the information and special offers for which you qualify, plus easy access to accessories from our convenient home shopping network.

Most importantly, you can count on our uncompromising commitment to your total satisfaction.

All of this is our way of saying welcome - and thanks for investing in a PHILIPS product.

P.S. To get the most from your PHILIPS purchase, be sure to complete and return your Product Registration Card at once, or register online at: www.philips.com/welcome

Know these **safety** symbols

	CAUTION RISK OF ELECTRIC SHOCK DO NOT OPEN	
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE. REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.		



This "bolt of lightning" indicates uninsulated material within your unit may cause an electrical shock. For the safety of everyone in your household, please do not remove product covering.



The "exclamation point" calls attention to features for which you should read the enclosed literature closely to prevent operating and maintenance problems.

WARNING: To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture, and objects filled with liquids, such as vases, should not be placed on this apparatus.

CAUTION: To prevent electric shock, match wide blade of plug to wide slot, fully insert.

ATTENTION: Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.

For Customer Use

Enter below the Serial No. which is located on the rear of the cabinet. Retain this information for future reference.

Model No. _____
Serial No. _____

PHILIPS Visit our World Wide Web Site at <http://www.philips.com/welcome>

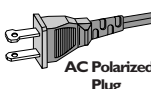


PRECAUTIONS

IMPORTANT SAFETY INSTRUCTIONS

Read before operating equipment

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and third grounding prong. The wide blade or third prong are provided for your safety. When the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12.  Use only with a cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.
15. This product may contain lead and mercury. Disposal of these materials may be regulated due to environmental considerations. For disposal or recycling information, please contact your local authorities or the Electronic Industries Alliance: www.eiae.org
16. **Damage Requiring Service** - The appliance should be serviced by qualified service personnel when:
 - A. The power supply cord or the plug has been damaged; or
 - B. Objects have fallen, or liquid has been spilled into the appliance; or
 - C. The appliance has been exposed to rain; or
 - D. The appliance does not appear to operate normally or exhibits a marked change in performance; or
 - E. The appliance has been dropped, or the enclosure damaged.
17. **Tilt/Stability** - All televisions must comply with recommended international global safety standards for tilt and stability properties of its cabinet design.

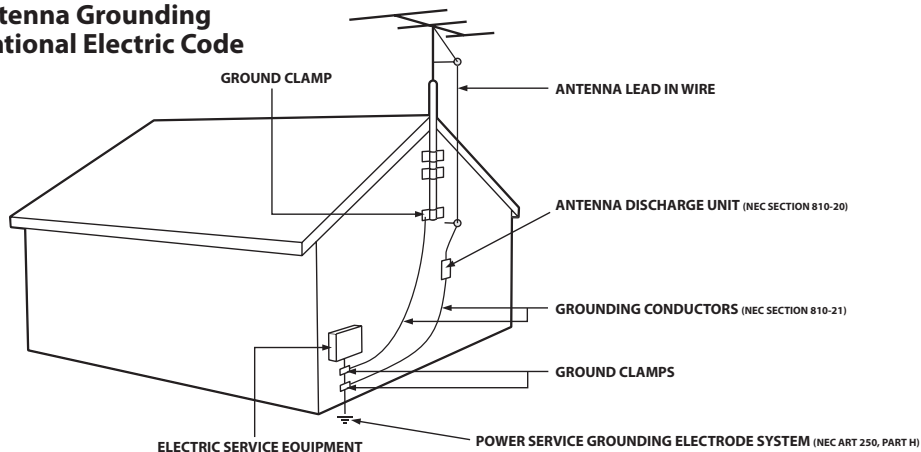


- Do not compromise these design standards by applying excessive pull force to the front, or top, of the cabinet which could ultimately overturn the product.
- Also, do not endanger yourself, or children, by placing electronic equipment/toys on the top of the cabinet. Such items could unsuspiciously fall from the top of the set and cause product damage and/or personal injury.

18. **Wall or Ceiling Mounting** - The appliance should be mounted to a wall or ceiling only as recommended by the manufacturer.
19. **Power Lines** - An outdoor antenna should be located away from power lines.
20. **Outdoor Antenna Grounding** - If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electric Code, ANSI/NFPA No. 70- 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding connectors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure below.
21. **Object and Liquid Entry** - Care should be taken so that objects do not fall and liquids are not spilled into the enclosure through openings.
 - a) **Warning:** To reduce the risk of fire or electric shock, this apparatus should not be exposed to rain or moisture and objects filled with liquids, such as vases, should not be placed on this apparatus.
22. **Battery Usage CAUTION** - To prevent battery leakage that may result in bodily injury, property damage, or damage to the unit:
 - Install all batteries correctly, with + and - aligned as marked on the unit.
 - Do not mix batteries (old and new or carbon and alkaline, etc.).
 - Remove batteries when the unit is not used for a long time.
23. **Overloading** - Do not overload wall outlets, extension cords, or integral convenience receptacles as this can result in a risk of fire or electric shock.
24. **Object and Liquid Entry** - Never push objects of any kind into this product through openings as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.
25. **Replacement Parts** - When replacement parts are required, be sure the service technician has used replacement parts specified by the manufacturer or have the same characteristics as the original part. Unauthorized substitutions may result in fire, electric shock, or other hazards.
26. **Safety Check** - Upon completion of any service or repairs to this product, ask the service technician to perform safety checks to determine that the product is in proper operating condition.

Note to the CATV system installer: This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

Example of Antenna Grounding as per NEC - National Electric Code





PRECAUTIONS

Welcome!

Congratulations on your purchase, and welcome to Philips!

To fully benefit from the support that Philips offers, register your product at www.philip.com/welcome.

This product lets you record on DVD and playback DVD/CD of various kinds. Read this user manual carefully to learn how to use the features described in this manual.

Safety Precautions

Warning: To prevent fire or shock hazard, do not expose this device to rain or moisture.

Federal Communications Commission (FCC) Warning: Any unauthorized changes or modifications to this device void the user's authority to operate it.

- Do not stand the unit up vertically. Install the unit in a horizontal and stable position.
- Be sure to remove the disc and unplug the AC power cord from the outlet before carrying the unit.

Department of Health and Human Services (DHHS) Certification: Complies with 21 Center for Radiation (CFR) chapter 1 subchapter J applicable at time of manufacture.

Laser Safety: This unit employs a laser. Only a qualified service person should remove the cover or attempt to service this device, due to possible eye injury.

CAUTION: USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK DEFEATED. DO NOT STARE INTO BEAM. THE BEAM IS LOCATED INSIDE, NEAR THE DECK MECHANISM.

Special Information for Canadian Users: This Class B digital apparatus complies with Canadian ICES-003. Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radio/TV Interference: This device has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- 1) Reorient or relocate the receiving antenna.
- 2) Increase the separation between the device and the receiver.
- 3) Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- 4) Consult the dealer or an experienced radio/TV technician for help.

Copyright Notice: The making of unauthorized copies of copy-protected material, including computer programs, files, broadcasts and sound recordings, may be an infringement of copyrights and constitute a criminal offence. This device should not be used for such purposes.

Copyright Protection: Unauthorized copying, broadcasting, public performance, and lending of Discs are prohibited.

This product incorporates copyright protection technology that is protected by U.S. patents and other intellectual property rights. Use of this copyright protection technology must be authorized by Macrovision, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision. Reverse engineering or disassembly is prohibited.

Notice for Progressive Scan Use: Consumers should note that not all high definition television sets are fully compatible with this product and may cause artifacts to be displayed in the picture. In case of picture problems with 525 (480) progressive scan output, it is recommended that the user switch the connection to the 'standard definition' output. If there are questions regarding your TV set compatibility with this 525p (480p) DVD player, please contact our customer service center.

Declaration of Conformity

Model Number: DVDR3506/37
Trade Name: Philips
Responsible Party: PHILIPS CONSUMER ELECTRONICS
A Division of Philips Electronics North America Corp
P.O. Box 671539 Marietta, GA30006 0026
1-888-PHILIPS (744-5477)

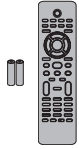
Copyright 2007 Philips. All rights reserved.



PRECAUTIONS

Supplied Accessories

remote control with batteries (AAAx2)



user manual



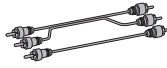
RF coaxial cable



quick start guide



RCA audio/video cables



Maintenance

Servicing

- Please refer to relevant topics on "TROUBLESHOOTING" on pages 99-103 before returning the product.
- If you need to call a customer service representative, please know the model number and serial number of your product before you call. This information is displayed on the back of the product. Also, please take a moment to identify the problem you are having, and be prepared to explain this to the representative. If you believe the representative will need to help you with operations, please stay near the product. Our representatives will be happy to assist you. For online reference, please visit our web site at <http://www.philips.com/welcome>

Cleaning the cabinet

- Wipe the front panel and other exterior surfaces of the unit with a soft, slightly damp cloth.
- Never use a solvent, thinner, benzene or alcohol to clean the unit. Do not spray insecticide liquid near the unit. Such chemicals may discolor the surface or damage the unit.

Cleaning discs

- When a disc becomes dirty, clean it with a cleaning cloth. Wipe the disc from the center to out. Do not wipe in a circular motion.
- Do not use solvents such as benzene, thinner, commercially available cleaners, detergent, abrasive cleaning agents or antistatic spray intended for analog records.

Cleaning the disc lens

- If this unit still does not perform properly although you refer to the relevant sections and to "TROUBLESHOOTING" in this user manual, the laser optical pickup unit may be dirty. Consult your dealer or an Authorized Service Center for inspection and cleaning of the laser optical pickup unit.

Disc handling

- Handle the discs so that fingerprints and dust do not adhere to the surfaces of the discs.
- Always store the disc in its protective case when it is not used.

Installation Location

For safety and optimum performance of this unit:

- Install the unit in a horizontal and stable position. Do not place anything directly on top of the unit. Do not place the unit directly on top of the TV.
- Shield it from direct sunlight and keep it away from devices of intense heat. Avoid dusty or humid places. Avoid places with insufficient ventilation for proper heat dissipation. Do not block the ventilation holes on the sides of the unit. Avoid locations subject to strong vibration or strong magnetic fields.

Moisture Condensation Warning

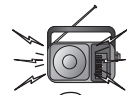
Moisture condensation may occur inside the unit when it is moved from a cold place to a warm place or after heating a cold room or under conditions of high humidity. Do not use this unit at least for 2 hours until its inside gets dry.

IR Signal Check

If the remote control does not work properly, you can test if the remote control sends out the infrared signal with AM radio or a digital camera (including built-in camera of cellular phone). It will help to define the cause of malfunction.

• With an AM radio:

Tune an AM radio to a station with no broadcasting. Press a button on remote control toward the radio. Sound will be fluttering when you press any key and the radio receives the signal. This means the remote control is working.



• With a digital camera (including built-in camera of cellular phone):

Direct a digital camera to remote control, press and hold a button on remote control. If infrared light appears through digital camera, the remote control is working.



Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.



HDMI, the HDMI logo and High-Definition Multimedia Interface are trademarks or registered trademarks of HDMI Licensing LLC.

Dolby Digital Recording

"Dolby® Digital Recording enables consumers to record high-quality video with stereo sound on recordable DVD discs. The technology, when utilized instead of PCM recording, also saves recordable disc space, allowing for higher video resolution or extended recording time on each DVD. DVDs created using Dolby Digital Recording will play back on all DVD-video players."

Note: This is true when the players are compatible with actual recordable DVD discs.

CONTENTS

Introduction

PRECAUTIONS	2
FEATURES	8
Symbols Used in this User Manual	8
FUNCTIONAL OVERVIEW	9
Front Panel	9
Rear Panel	9
Remote Control	10
Front Panel Display	12

Connections

ANTENNA CABLE CONNECTION	13
RF MODULATOR CONNECTION	14
CONNECTION TO A CABLE / SATELLITE BOX	15
CONNECTION TO A TV	16
CONNECTION TO A TV WITH AN HDMI COMPATIBLE PORT	17
CONNECTION TO AN AUDIO SYSTEM	19

Basic Setup

GUIDE TO ON-SCREEN DISPLAYS AND MENUS	20
On-Screen Display / Menu	20
Main Menu	22
INITIAL SETTING	23
CHANNEL SETTING	24
Auto Channel Scan	24
Adding / Deleting Channels	25
SETTING THE CLOCK	27
Auto Clock Setting	27
Manual Clock Setting	28
Daylight Saving Time	28
TUNER SETTINGS	29
Switching Analog Mode / Digital Mode	29
Channel Selection	29
Selecting TV Audio	30
DTV Closed Caption	32
Closed Caption Style	33

Recording

INFORMATION ON DVD RECORDING	35
BEFORE RECORDING	36
Make Recording Compatible	36
Setting for Auto Chapter	36
BASIC RECORDING & ONE-TOUCH TIMER RECORDING	37
TIMER RECORDING	39
Hints for Timer Recording	42
OVERWRITING UNNECESSARY TITLE	43
Overwriting from the Beginning of the Title	43
Overwriting in the Middle of the Title	43
Hints for Overwriting	44
SETTINGS FOR AN EXTERNAL DEVICE	45
Connection to an External Device	45
Recording from an External Device	46
DV DUBBING	47
Guide to DV and On-Screen Display	47
DVC to DVD Dubbing	48
SETTING A DISC TO PROTECT	50
PLAYING THE DISCS IN OTHER DVD PLAYERS	51
Finalizing a Disc	51
Auto Finalizing	52

CONTENTS

Playback

INFORMATION ON PLAYBACK	53
BASIC PLAYBACK	55
Direct Playback	55
Playback from the Title List	56
Playing Back an Audio CD and a CD-RW/-R with MP3/Windows Media™ Audio/JPEG Files	58
Playing Back a DivX®	59
Using the Title / Disc Menu	61
Pause	61
SPECIAL PLAYBACK	62
Resume Playback	62
Fast Forward / Fast Reverse Playback	62
Skipping TV Commercials During Playback	62
Rapid Playback	63
Step by Step Playback	63
Slow Forward / Slow Reverse Playback	63
Zoom	64
Marker Setting	64
SEARCH	65
Title / Chapter Search	65
Track Search	65
Time Search	66
REPEAT / RANDOM / PROGRAM PLAYBACK / SLIDE SHOW	67
Repeat Playback	67
Random Playback	67
Program Playback	68
Slide Show	68
SELECTING THE FORMAT OF AUDIO AND VIDEO ..	69
Switching Subtitles	69
Switching Audio Soundtrack	69
Switching Virtual Surround System	70
Switching Camera Angles	70
Reducing Block Noise	70

Editing

INFORMATION ON DISC EDITING	71
Guide to a Title List	71
Editing Discs	71
EDITING DISCS	72
Deleting Titles	72
Putting Names on Titles	73
Setting Chapter Marks	74
Clearing Chapter Marks	75
Hiding Chapters	77
Setting Pictures for Thumbnails	78
Dividing a Title	79
Putting Name on Disc	80
Setting or Releasing Disc Protect	81
Erasing Disc	82
Making Edits Compatible	83

Function Setup

LIST OF SETTINGS	84
SETUPS	87
Playback	87
Display	91
Video	93
DivX®	95
HDMI	96
Reset All	98

Others

TROUBLESHOOTING	99
Frequently Asked Questions	103
LANGUAGE CODE	104
GLOSSARY	105
SPECIFICATIONS	106
LIMITED WARRANTY	107

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

FEATURES

This unit not only plays back DVD and CD but also offers features for you to record on DVD and edit them after that. The following features are offered with this unit.

Recording

This unit is compatible with DVD+RW/DVD-RW, which is rewritable repeatedly and DVD+R/DVD-R, which is available for recording once. You can choose either one for your convenience. Even if you choose DVD-RW/-R, these discs will automatically be recorded in the DVD+VR mode.

Up to 12 program recording:

You can program the unit to record up to 12 programs within a one-month period. Daily or weekly program recordings are also available.

One-touch timer recording (OTR):

You can easily set a recording time as you prefer. Every time [RECORD] or [REC ●] is pressed during recording, the recording time will be increased by 30 minutes up to 6 hours. The recording automatically stops when the recording time you set is reached or the disc is full.

DV dubbing:

This function helps you to easily dub the contents of the DVC (digital video camcorder) to DVD.

Automatic chapter mark setting:

Chapter marks will be put on recordings as you set before attempting to record.

Automatic title list making:

The unit makes a title list with the index automatically.

Left channel stereo recording:

This unit can record the sound of the left channel monaural input as left and right channels automatically (the input from the E2 only).

Playback

Theater surround sound in your home:

When connecting the unit to an amplifier or a decoder which is compatible with Dolby Digital, you can experience the theater surround sound from discs with surround sound system.

Quick search for what you want to watch:

You can easily find the part you want to watch using the search function. Search for a desired point on a disc by title, chapter or time.

Virtual surround system:

You can enjoy stereophonic space through your existing 2 channel stereo system.

Playing back MP3/Windows Media™ Audio/JPEG/DivX® files:

You can enjoy MP3/Windows Media™ Audio/JPEG/DivX® files which are recorded on CD-RW/-R. DivX® files can also be recorded on DVD+RW/+R or DVD-RW/-R.

Editing

Deleting titles:

You can delete titles which you do not need anymore.

Putting names on titles:

You can put your favorite names on titles.

Setting / clearing chapter marks:

You can set / clear chapter marks on titles.

Hiding chapters:

To keep others from playing back some chapters without permission, you can hide chapters.

Setting pictures for thumbnails:

You can change pictures for thumbnails.

Dividing titles:

You can divide a title into 2 or more.

Putting name on disc:

You can put your favorite disc name.

Compatibility

Available for playing back discs on a regular DVD player:

Recorded discs can be played back on regular DVD players, including computer DVD drives compatible with DVD-video playback. Although DVD+R are playable on other units without finalization in most cases, it is recommended to finalize in order to stabilize the performance. For DVD-RW/-R, you need to finalize the recorded discs to play on other DVD players.

Others

Progressive scan system

Unlike conventional interlace scanning, the progressive scan system provides less flickering and images in higher resolution than that of traditional television signals.














HDMI (High-Definition Multimedia Interface)

You can enjoy clearer audio/video output when connecting this unit to a display device with an HDMI-compatible port.

Symbols Used in this User Manual

To specify for what disc type each function is, we put the following symbols at the beginning of each item to operate.

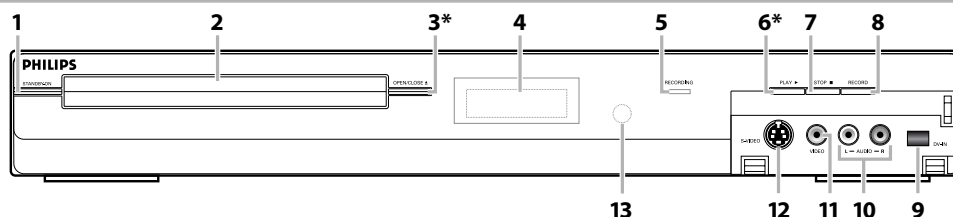
- * DVD-RW/-R recorded in VR mode or non compatible recording format are not playable.
- * DVD-RW recorded in the mode other than +VR is not recordable on this unit unless you erase all contents in the disc (refer to page 82).
- * DVD-R recorded in the mode other than +VR is not recordable on this unit.

Symbol	Description
For Recording, Playing Back, and Editing	
	Description refers to DVD+RW
	Description refers to DVD+R
	Description refers to DVD-RW
	Description refers to DVD-R
For Playback only	
	Description refers to DVD+R DL
	Description refers to DVD-video
	Description refers to audio CD
	Description refers to video CD with PBC function
	Description refers to video CD without PBC function
	Description refers to CD-RW/-R with MP3 files
	Description refers to CD-RW/-R with Windows Media™ Audio files
	Description refers to CD-RW/-R with JPEG files
	Description refers to DVD+RW/+R, DVD-RW/-R and CD-RW/-R with DivX® files

If you do not find any of the symbols listed above under the function heading, the operation is applicable to all media.

FUNCTIONAL OVERVIEW

Front Panel



(*) The unit can also be turned on by pressing these buttons.

1. STANDBY-ON button

Press to turn the unit on and off.
If timer programmings have been set, press to set the unit in timer-standby mode.

2. Disc tray

Place a disc when opening the disc tray.

3. OPEN/CLOSE ▲ button*

Press to open or close the disc tray.

4. Display

Refer to "Front Panel Display" on page 12.

5. RECORDING indicator

Lights up when recording function works.

6. PLAY ► button*

Press to start or resume playback.

7. STOP ■ button

Press to stop playback or recording.

8. RECORD button

Press once to start a recording. Press repeatedly to start one-touch timer recording.

9. DV-IN jack (E3)

Use to connect the DV output of external device with a DV cable.

10. AUDIO input jacks (E2)

Use to connect external device with a RCA audio cable.

11. VIDEO input jack (E2)

Use to connect external device with a RCA video cable.

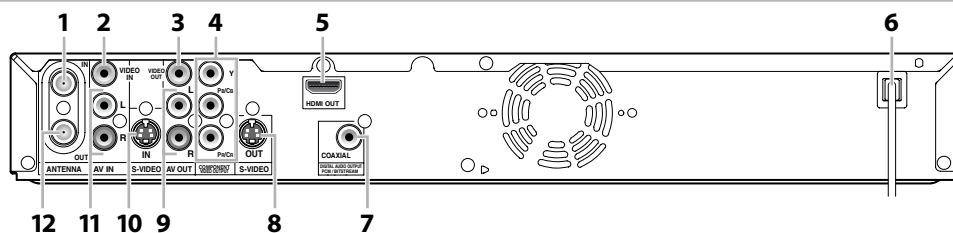
12. S-VIDEO input jack (E2)

Use to connect the S-video output of external device with an S-video cable.

13. Infrared sensor window

Receive signals from your remote control so that you can control the unit from a distance.

Rear Panel



1. ANTENNA IN jack

Use to connect an antenna.

2. VIDEO IN jack (E1)

Use to connect external device with a RCA video cable.

3. VIDEO OUT jack

Use to connect a TV monitor, AV receiver or other device with a RCA video cable.

4. COMPONENT VIDEO OUTPUT jacks

Use to connect a TV monitor with component video inputs with a component video cable.

5. HDMI OUT jack

Use an HDMI cable to connect to a display with an HDMI compatible port.

6. AC Power Cord

Connect to a standard AC outlet to supply power to this unit.

7. COAXIAL DIGITAL AUDIO OUTPUT jack

Use to connect an AV receiver, Dolby Digital decoder or other device with a digital audio coaxial input jack with a digital audio coaxial cable.

8. S-VIDEO OUT jack

Use to connect the S-video input of a TV monitor, AV receiver or other device with an S-video cable.

9. AV OUT jacks

Use to connect a TV monitor, AV receiver or other device with a RCA audio cable.

10. S-VIDEO IN jack (E1)

Use to connect the S-video output of external device with an S-video cable.

11. AV IN jacks (E1)

Use to connect external device with a RCA audio cable.

12. ANTENNA OUT jack

Use to connect an RF coaxial cable to pass the signal from the ANTENNA IN to your TV.

Note

- Do not touch the inner pins of the jacks on the rear panel. Electrostatic discharge may cause permanent damage to the unit.
- This unit does not have the RF modulator.

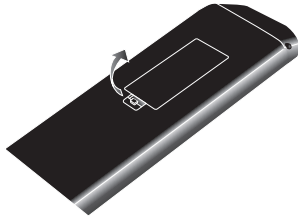
FUNCTIONAL OVERVIEW

Remote Control

Installing the Batteries in the Remote Control

Install the batteries (AAx2) matching the polarity indicated inside battery compartment of the remote control.

1 Open the cover.

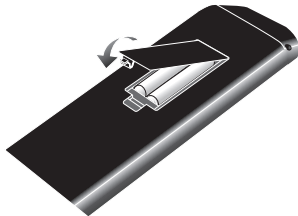


2 Insert batteries.



Make sure to match + and - on the batteries to the marks indicated in the battery compartment.

3 Close the cover.



Note

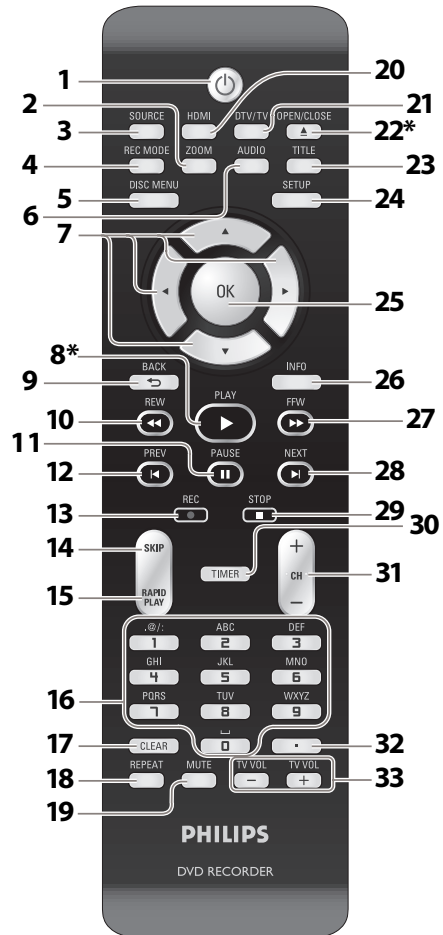
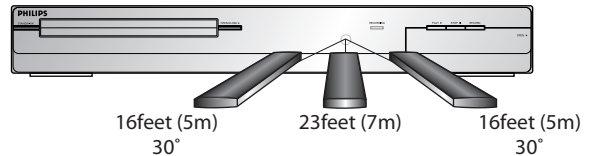
Incorrect use of batteries can result in hazards such as leakage and bursting. Please observe the following:

- Do not mix new and old batteries together.
- Do not use different kinds of batteries together. Although they may look similar, different batteries may have different voltages.
- Make sure that the + and - ends of each battery match the indications in the battery compartment.
- Remove batteries from battery compartment that is not going to be used for a month or more.
- When disposing of used batteries, please comply with governmental regulations or environmental public instruction's rules that apply in your country or area.
- Do not recharge, short-circuit, heat, burn or disassemble batteries.

Using a Remote Control

Keep in mind the following when using the remote control:

- Make sure that there are no obstacles between the remote control and the infrared sensor window on the unit.
- Remote operation may become unreliable if strong sunlight or fluorescent light is shining on the infrared sensor window of the unit.
- Remote control for different devices can interfere with each other. Avoid using remote control for other device located close to the unit.
- Replace the batteries when you notice a fall off in the operating range of the remote control.
- The maximum operable ranges from the unit are as follows.
 - **Line of sight:** approx. 23 feet (7m)
 - **Either side of the center:** approx. 16 feet (5m) within 30°
 - **Above:** approx. 16 feet (5m) within 15°
 - **Below:** approx. 10 feet (3m) within 30°





FUNCTIONAL OVERVIEW

(*) The unit can also be turned on by pressing these buttons.

1. STANDBY-ON button

Press to turn the unit on and off. If timer program-ings have been set, press to set the unit in timer-standby mode.

2. ZOOM button

During playback, press to enlarge the picture on the TV screen.

3. SOURCE button

Press to select the appropriate input.

4. REC MODE button

Press to switch the recording mode.

5. DISC MENU button

Press to display the disc menu.

6. AUDIO button

- Press to switch the audio language for digital TV.
- Press to display the audio menu during playback.

7. Cursor / / / buttons

Press to select items or settings.

8. PLAY button*

Press to start playback or resume playback.

9. BACK button

Press to return to the previously displayed menu screen.

10. REW button

- During playback, press to fast reverse playback.
- When playback is in pause, press to slow reverse playback.

11. PAUSE button

Press to pause playback or recording.

12. PREV button

- During playback, press to return to the beginning of the current chapter, track or file.
- When playback is in pause, press repeatedly to reverse the playback step by step.

13. REC button

- Press once to start a recording.
- Press repeatedly to start the one-touch timer recording.

14. SKIP button

During playback, press to skip 30 seconds.

15. RAPID PLAY button

During playback, press to play back in a slightly faster/slower mode with keeping the audio quality.

16. Number/Character buttons

- Press to select channel numbers.
- Press to select a title/chapter/track/file on display.
- Press to enter values for the settings in the main menu.
- Press to enter title names.

17. CLEAR button

Press to clear the password once entered or to cancel the programming for CD or to clear the selected marker number, etc.

18. REPEAT button

Press to display the repeat menu.

19. MUTE button

Limited to the Philips brand TV products, you can mute the TV volume with these buttons.

20. HDMI button

Press to set the HDMI connector's video signal output mode .

21. DTV/TV button

Press to switch between digital TV (DTV) mode and analog TV (TV) mode.

22. OPEN/CLOSE button*

Press to open or close the disc tray.

23. TITLE button

Press to display the title list.

24. SETUP button

- Press to display the main menu.
- During DVD playback, press and hold for more than 3 seconds to switch the progressive scanning mode to the interlace mode.

25. OK button

Press to confirm or select menu items.

26. INFO button

Press to display the display menu on or off.

27. FFW button

- During playback, press to fast forward playback.
- When playback is in pause, press to slow forward playback.

28. NEXT button

- During playback, press to skip to the next chapter, track or file.
- When playback is in pause, press repeatedly to forward the playback step by step.

29. STOP button

- Press to stop playback or recording.
- Press to exit from the title list.

30. TIMER button

Press to display the timer programming list.

31. CH / buttons

Press to change the channel up and down.

32. Confirm () button

Analog mode:

Press to confirm the channel selection made by **[the Number buttons]**.

Digital mode:

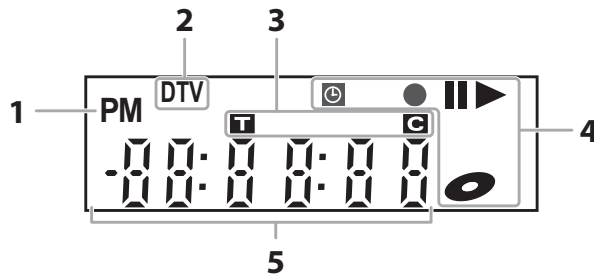
Press to confirm the major / minor channel selection made by **[the Number buttons]**.

33. TV VOL / button

Limited to the Philips brand TV products, you can adjust the TV volume with these buttons.

FUNCTIONAL OVERVIEW

Front Panel Display



1. PM

: Appears in the afternoon with the clock display.

2. DTV

: Appears when the channel is in DTV mode.

3. Title / track / file and chapter mark



: Appears when indicating a title / track / file number.



: Appears when indicating a chapter number.

4. Current status of the unit



: Appears when playback is paused.



: Appears when playing back a disc.



: Appears when the timer programming or OTR has been set and is proceeding.

: Flashes when all timer recordings have been finished.



: Appears during recording process.

: Flashes when a recording pauses.



: Appears when a disc is in this unit.

5. Displays the following

- Elapsed playback time
- Current title / chapter / track / file number
- Recording time / remaining time
- Clock
- Channel number
- Remaining time for one-touch timer recording
- Selected HDMI OUTPUT mode

Display Message



Appears when the disc tray is opening.



Appears when HDMI output mode (480p) is selected.



Appears when the disc tray is closing.



Appears when HDMI output mode (720p) is selected.



Appears when a disc is loaded on the disc tray.



Appears when HDMI output mode (1080i) is selected.



Appears when data is being written on a disc.



Appears when HDMI output mode (1080p) is selected.

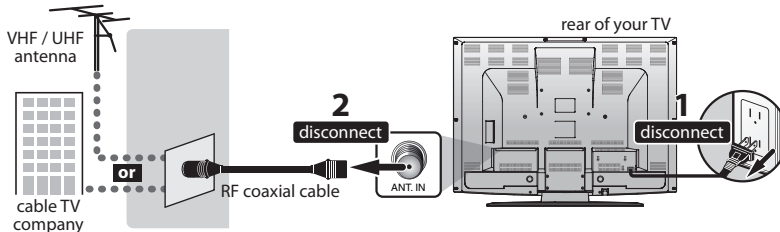


Appears when the PBC function is activated. (Video CD playback only. Refer to page 54.)

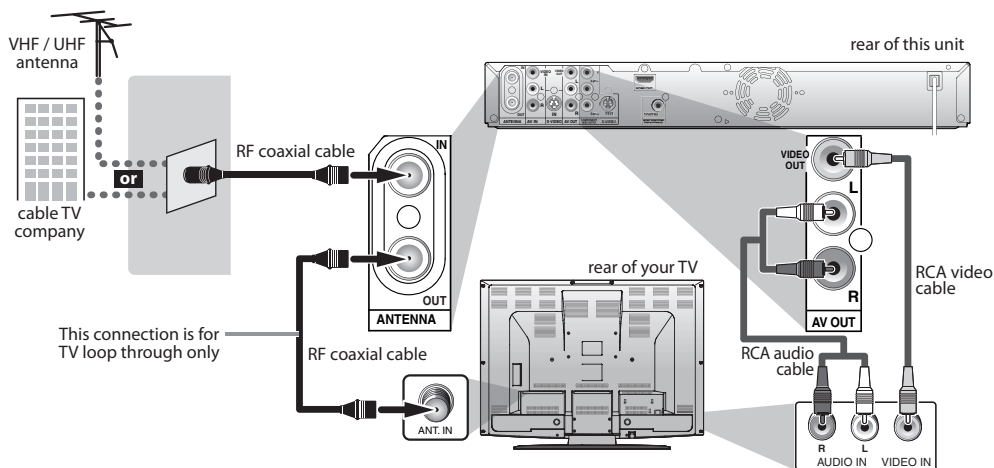
ANTENNA CABLE CONNECTION

This section describes how to connect your unit to an antenna, cable box, etc.

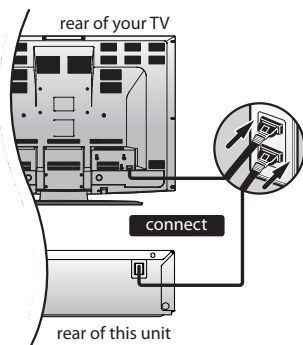
- 1 Disconnect the power cord of your TV from the AC outlet.**
- 2 Disconnect RF coaxial cable from antenna input jack of your TV.**



- 3 Connect cables to the unit. Make the basic connection as illustrated below.**



- 4 Plug in the power cord of this unit and your TV to the AC outlet.**



Supplied cables used in this connection are as follows:

- RF coaxial cable x 1
 - RCA audio cable (L/R) x 1
 - RCA video cable x 1
- Please purchase the rest of the necessary cables at your local store.

*Once connections are completed, turn on the TV and begin initial setting. Channel scanning is necessary for the unit to memorize all available channels in your area. (Refer to "INITIAL SETTING" on page 23.)

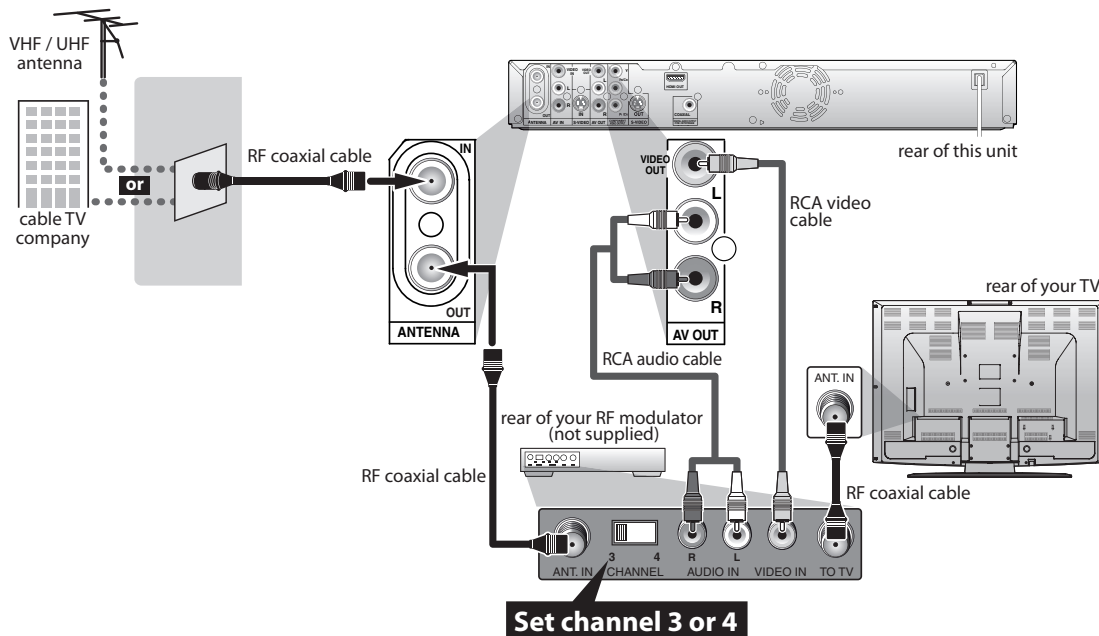
Note

- For your safety and to avoid damage to the device, please unplug the RF coaxial cable from the ANTENNA IN jack before moving the unit.
- If you use an antenna to receive analog TV, it should also work for DTV reception. Outdoor or attic antennas will be more effective than set-top versions.
- Antenna out is for tuner pass through only. DVD playback through the RF is not possible.

RF MODULATOR CONNECTION

If your TV has antenna in jack only, it is still possible to connect this unit to your TV by using a commercially available stereo audio/video RF modulator. In this case, follow the instructions below.

- 1) Disconnect the power cords of the devices from the AC outlet.
- 2) Make the connection as illustrated below.
- 3) **Set your RF modulator's channel 3/4 switch to either 3 or 4**, whichever the TV channel is least used in your area. If your RF modulator has a modulator/antenna switch, set it according to the manual supplied with the RF modulator.
- 4) Plug in the power cords of the devices to the AC outlet.
- 5) **Turn on your TV and choose the same channel as you set the RF modulator's channel 3/4 switch to.** For more details, follow the manual supplied with the RF modulator.



Supplied cables used in this connection are as follows:

- RF coaxial cable x 1
- RCA audio cable (L/R) x 1
- RCA video cable x 1

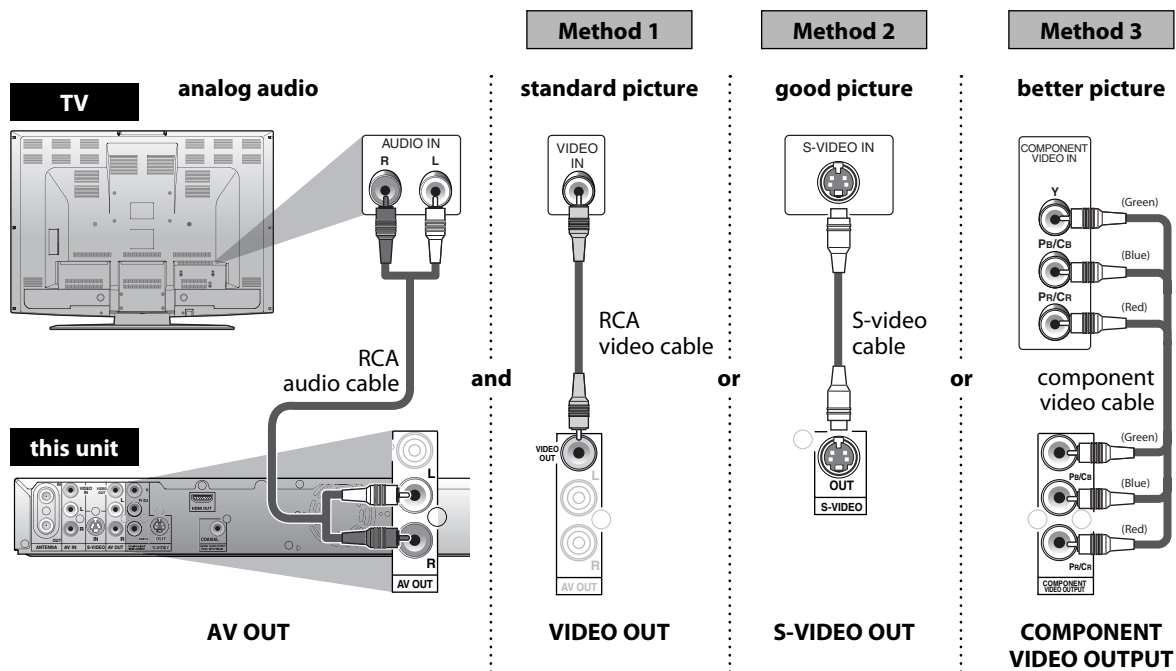
Please purchase the rest of the necessary cables at your local store.

Note

- RF modulator is not supplied with this unit. You need to purchase it at your local store.
- The quality of picture may become poor if this unit is connected to an RF modulator.

CONNECTION TO A TV

Make one of the following connections, depending on the capabilities of your existing device.



Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- RCA video cable x 1

Please purchase the rest of the necessary cables at your local store.

After you have completed the connections

- Switch the input selector on your TV to an appropriate external input channel. Press a button on the TV's original remote control that selects an external input channel until the DVD recorder's opening picture appears. Check your TV owner's manual for details.

Note

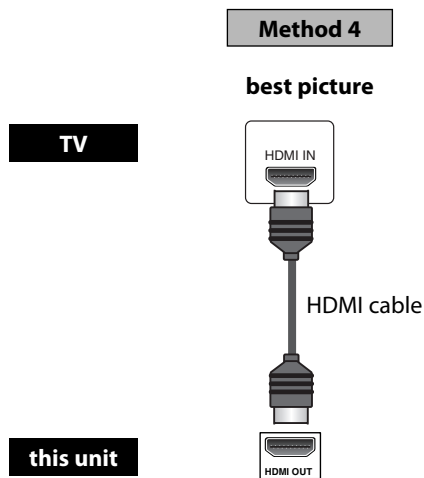
- Connect this unit directly to the TV. If the RCA audio/video cables are connected to a VCR, pictures may be distorted due to the copy protection system.

To set progressive scan mode, refer to page 94

- This unit is compatible with the progressive scan system. The feature provides you with the higher quality images than the traditional output system does. To utilize this feature, you must set "Progressive Scan" to "ON".

CONNECTION TO A TV WITH AN HDMI COMPATIBLE PORT

A simple 1-cable connection with a device having an HDMI (high-definition multimedia interface) connector allows digital transfer of the digital images of DVD-video and other devices.



When connecting with an HDMI cable, the audio signal will be output as the digital audio signal simultaneously, so you do not need the analog audio connection described on page 16.

Cables not included.

Please purchase the necessary cables at your local store.

HDMI Mode and Actual Output Signals

Press **[HDMI]** to select the HDMI output mode. The output mode changes as follows every time **[HDMI]** is pressed.

Front Panel Display	Video Output Signal
480P	480 Progressive
Press [HDMI]	↓
720P	720 Progressive
Press [HDMI]	↓
1080i	1080 interlaced
Press [HDMI]	↓
1080P	1080 Progressive
Press [HDMI]	

- The HDMI mode that is not supported by display device will be skipped.

CONNECTION TO A TV WITH AN HDMI COMPATIBLE PORT

Actual Output Modes by Media

Audio recording format of the disc		Dolby Digital setting of this unit	Actual output
DVD-video	Dolby Digital	PCM	2channel PCM
		Stream	Dolby Digital
	LPCM	PCM	2channel PCM
		Stream	
DivX®	Dolby Digital	PCM	2channel PCM
		Stream	Dolby Digital
	MP3 / MP2	PCM	2channel PCM
		Stream	

For audio CD, video CD, and MP3 / Windows Media™ Audio files, 2 channel PCM will be output regardless of the "Dolby Digital" setting.

*1 If the connected device is not compatible with HDMI BITSTREAM, audio will be output as PCM even if you select "Stream" in "Dolby Digital" setting.
Refer to pages 96-97 for "HDMI" setting.

Copyright protection system

To play back the digital video images of a DVD via an HDMI connection, it is necessary that both the player and the display device (or an AV amplifier) support a copyright protection system called HDCP (high-bandwidth digital content protection system). HDCP is copy protection technology that comprises data encryption and authentication of the connected AV device. This unit supports HDCP. Please read the operating instructions of your display device (or AV amplifier) for more information.

*HDMI: High Definition Multimedia Interface

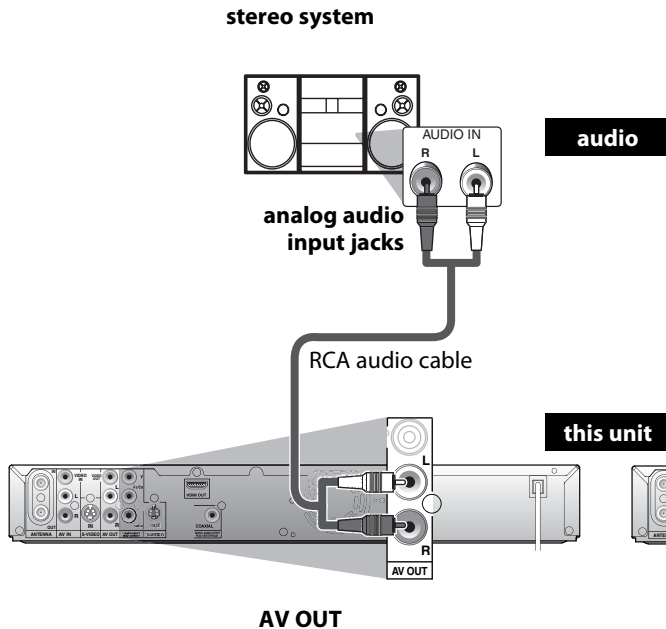
Note

- When using HDCP-incompatible display device, the image will not be viewed properly.
- Among the devices that support HDMI, some devices can control other devices via the HDMI connector; however, this unit cannot be controlled by another device vice the HDMI connector.
- The audio signals from the HDMI connector (including the sampling frequency, the number of channels and bit length) maybe limited by the device that is connected.
- Among the monitors that support HDMI, some do not support audio output (for example, projectors). In connections with device such as this unit, audio signals are not output from the HDMI output connector.
- When this unit's HDMI connector is connected to a DVI-D compatible monitor (HDCP compatible) with an HDMI-DVI converter cable, the signals are output in digital RGB.

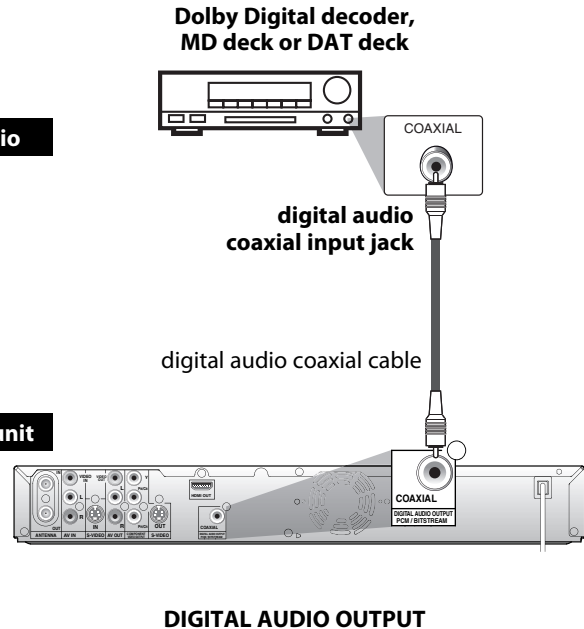
CONNECTION TO AN AUDIO SYSTEM

- When you change the connections, all devices should be turned off.
- Refer to the manual accompanying external devices for more information.

2 Channel Analog Audio Connection



Digital Audio Connection



Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
- Please purchase the rest of the necessary cables at your local store.

Connection	Setting	Setup > General Setting > Playback > Disc Audio > Dolby Digital
If output is Dolby Digital encoded audio, connect to a Dolby Digital decoder.		Stream
Connecting to an MD deck or DAT deck.		PCM
If not connected to any external devices.		PCM

* To complete these settings, refer to page 89.

Note

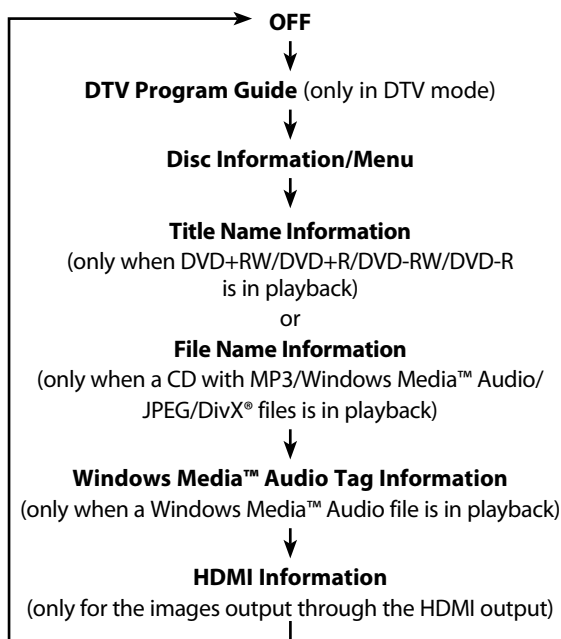
- The audio source on a disc in a Dolby Digital multi channel surround format cannot be recorded as digital sound by an MD or DAT deck.
- By connecting this unit to a Dolby Digital decoder, you can enjoy high-quality Dolby Digital multi channel surround sound as heard in the movie theaters.
- Playing back a DVD using incorrect settings may generate noise distortion and may also damage the speakers.

GUIDE TO ON-SCREEN DISPLAYS AND MENUS

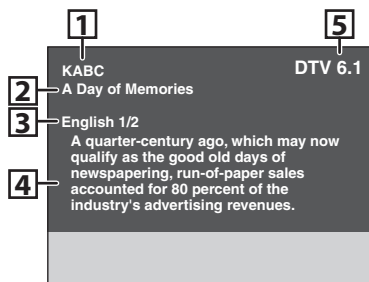
This unit uses the following on-screen displays and menus to guide you to the easy operations. The on-screen displays give you the information on the loaded disc, the disc/file in playback, or the HDMI status, etc. The menus allow you to change the various kinds of settings for playing back, recording, or editing to suite your preference.

On-Screen Display / Menu

The on-screen display changes in the following order as you press [INFO].



DTV Program Guide

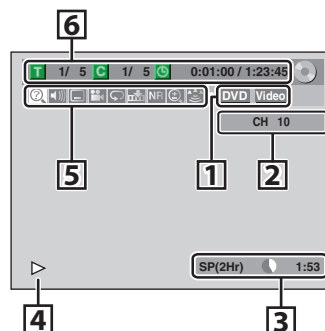


1. Broadcast station
2. Program title (max. 2 lines displayed)
3. Audio language ("Other" is displayed when the audio language cannot be acquired, or the acquired languages are other than English, Spanish or French.)
4. Program guide (max. 6 lines displayed)
5. Channel number

Note

- When the program guide is displayed in more than 7 lines, use [▲ / ▼] to scroll.
- "No description provided" is displayed when the program guide is not provided.

Disc Information / Menu



* This is an example screen only for explanation.

1. Indicates a disc type and format mode.
2. Indicates a channel number or selected external input position.
3. Indicates a recording mode and possible recording time left.
4. Indicates an operation status.
5. Each icon means:
 - [Search] : Search
 - [Audio] : Audio
 - [Subtitle] : Subtitle
 - [Angle] : Angle
 - [Repeat] : Repeat
 - [Marker] : Marker
 - [NR] : Noise Reduction
 - [Zoom] : Zoom
 - [Surround] : Surround
6. Indicates the current title number/total number of titles, the current chapter number/total number of chapters, and time lapse of the current title playback/total duration of the title.

Note

- This is an example screen only for explanation. Displayed items are depending on the disc you inserted.

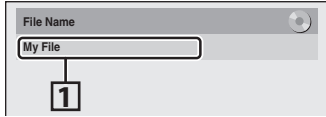
GUIDE TO ON-SCREEN DISPLAYS AND MENUS

Title/File Name Information

Title Name Information

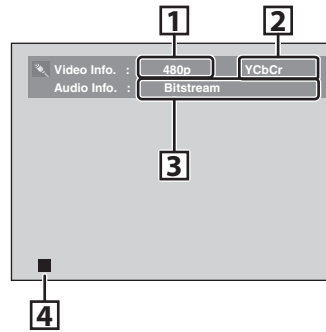


File Name Information



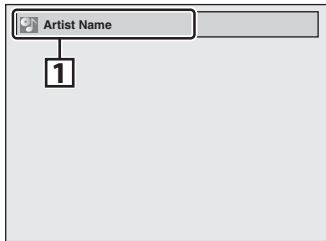
1. Displays title/file name.

HDMI Information



* This is an example screen only for explanation.

Windows Media™ Audio Tag Information



1. Indicates artist/title information (only when available)

- First, artist name will be displayed.



- If you press **[INFO]** one more time, title name will be displayed.

1. Indicates the resolution of the HDMI output image.
2. Indicates the HDMI video format.
3. Indicates the HDMI audio format.
4. Indicates an operation status.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

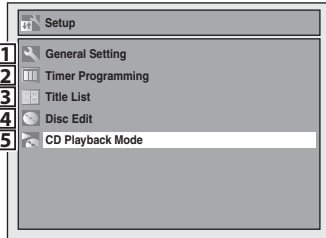
Function Setup

Others

GUIDE TO ON-SCREEN DISPLAYS AND MENUS

Main Menu

Press **[SETUP]** to display the main menu. Then use **[▲ / ▼]** to select a menu and press **[OK]** to display the menu. These menus provide entries to all main functions of the unit.



1. General Setting:

To go to general setting menu.

2. Timer Programming:

To program a timer recording.

3. Title List:

To call up the title list.

4. Disc Edit:

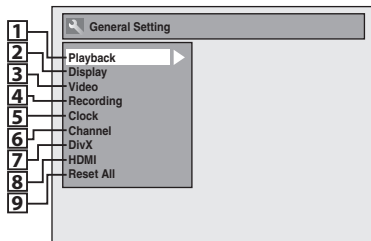
To set up the DVD disc setting.

5. CD Playback Mode:

To set up the CD playback setting.

- "CD Playback Mode" is available only when an audio CD, a video CD, a CD-RW/-R with MP3 / Windows Media™ Audio / JPEG files is inserted into the unit.

General Setting Menu



1. Playback:

To set up the unit to play back discs as you prefer.

2. Display:

To set up the OSD screen as you prefer.

3. Video:

To set up the video setting.

4. Recording:

To set up the unit to record to discs as you prefer.

5. Clock:

To set up the clock of the unit as you need.

6. Channel:

To adjust the channel setting of the unit as you prefer.

7. DivX:

To set up the setting for the DivX® playback.

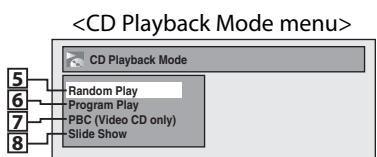
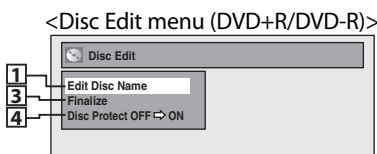
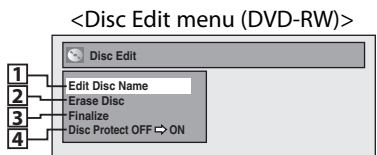
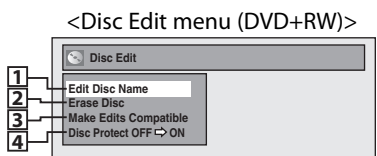
8. HDMI:

To set up the HDMI connection setting.

9. Reset All:

To reset the setting to the factory default.

Disc Edit / CD Playback Mode



1. Edit Disc Name:

Allows you to rename the disc.

2. Erase Disc: (DVD+RW/DVD-RW only)

Allows you to erase all contents in the disc and format it.

3. Make Edits Compatible: (DVD+RW only)

Allows you to memorize the editing status on the disc if you have added or deleted chapters, or made chapters hidden on this unit, and to effect it when playing back on the other unit.

Finalize: (DVD+R/DVD-RW/-R only)

Allows you to finalize a disc containing recorded titles.

4. Disc Protect :

Allows you to protect a disc from accidental editing or recording.

5. Random Play:

Allows you to activate the random playback feature.

6. Program Play: (audio CD/video CD only)

Allows you to activate the program playback feature.

7. PBC (Video CD only):

Allows you to select images or information on the menu screen by activating PBC (playback control) function.


8. Slide Show: (JPEG files only)

Allows you to select the display time of the slide show mode.

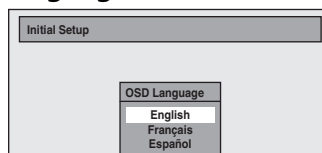
INITIAL SETTING

You need to follow these steps when you turn on this unit for the first time.

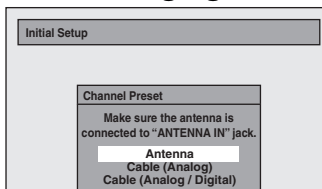


1 Press [STANDBY-ON ].
Turn the TV on. Select the input to which the unit is connected.

2 Use [▲ / ▼] to select your desired language, then press [OK] to set language.



3 Use [▲ / ▼] to select the type of broadcasting signal, then press [OK].



The unit will start getting channels available in your area.

Antenna:

(When using antenna)

The channels broadcasted in analog TV and digital TV are automatically scanned and memorized. Only the receivable channels in the area will be memorized.

Cable (Analog):

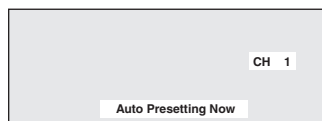
(When using basic cable)

The channels broadcasted in analog CATV are automatically scanned and memorized.

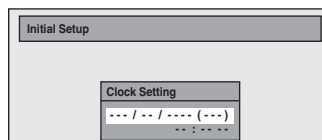
Cable (Analog / Digital):

(When using basic cable)

The channels broadcasted in analog CATV and digital CATV are automatically scanned and memorized.



4 Press [OK] to activate "Clock Setting".



5 Proceed to step 5 in "Manual Clock Setting" on page 28.

- If a PBS (public broadcasting station) is available in your area, follow "Auto Clock Setting" on page 27.

CHANNEL SETTING

If you have changed antenna connection, we recommend that you program available channels in your area with the following procedures.

Auto Channel Scan



1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

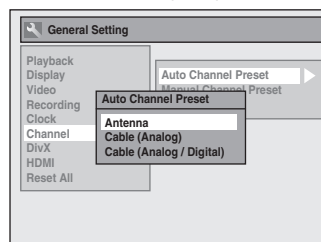
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Channel", then press [OK].

"Channel" menu will appear.

3 Use [▲ / ▼] to select "Auto Channel Preset", then press [OK].

4 Use [▲ / ▼] to select the type of broadcasting signal, then press [OK].



The unit will start getting channels available in your area.

- When aerial antenna is connected, select "Antenna".

- When connected to CATV, select "Cable (Analog)" or "Cable (Analog/Digital)".

To cancel the auto channel preset during scanning:

Press [BACK] or [SETUP] to cancel.

5 When scanning is over, press [SETUP] to exit.

To cycle through only the memorized channels, use [CH + / -].

To select a channel directly (including the ones not memorized), use [the Number buttons].

Note

- If the auto channel preset is canceled during presetting, some channels not yet preset may not be received.

CHANNEL SETTING

Adding / Deleting Channels

You may want to add or delete TV channels if your channel lineup changes or if you no longer watch some channels.

Adding channel is only available for the analog TV channels.

Make sure

- You perform "Auto Channel Scan" before adding or deleting the channels.



1 Press [DTV/TV] to select the mode (DTV or TV) to/from which you want to add/delete channels.

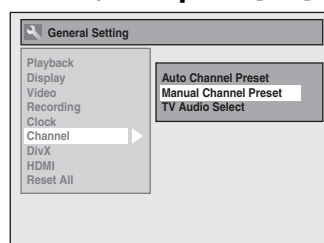
2 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

"General Setting" menu will appear.

3 Use [▲ / ▼] to select "Channel", then press [OK].

"Channel" menu will appear.

4 Use [▲ / ▼] to select "Manual Channel Preset", then press [OK].



- If you are adding or deleting analog TV/CATV channels, go to **ANALOG** to continue.
- If you are deleting digital TV/CATV channels, go to **DIGITAL** to continue.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

Instructions continue on the next page.

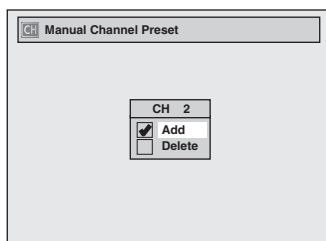
CHANNEL SETTING

ANALOG

5 Select the channel number to add or delete.

- Use [CH + / -] to cycle through only the memorized channels.
- Use [◀ / ▶] to cycle through all the channels including the ones not memorized.
- Use [the Number buttons] to select a channel directly.
- When a memorized channel is selected, "Add" is checked and highlighted as a default.
- When an unmemorized channel is selected "Delete" is checked and highlighted as a default.

6 Use [▲ / ▼] to select "Add" or "Delete", then press [OK].



Your setting will be activated and it will automatically switch to the next channel so that you can continue adding or deleting channels.

7 Press [SETUP] to exit.

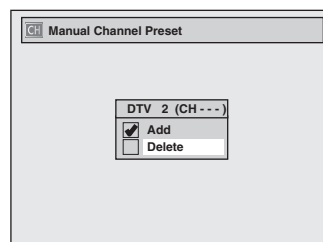
DIGITAL

5 Select the channel number to delete.

- Only the major channel is displayed in "Manual Channel Preset" menu. (The channel number displayed in the parenthesis is a virtual channel number)
- Use [CH + / -] to cycle through only the memorized channels.
- You cannot use [◀ / ▶] for the digital TV channel selection.
- Use [the Number buttons] to select a channel directly.
- When a memorized channel is selected, "Add" is checked and highlighted as a default.
- When an unmemorized channel is selected "Delete" is checked and highlighted as a default.

6 Use [▲ / ▼] to select "Delete", then press [OK]. Then select the next channel to delete.

- If the setting is complete, press [BACK ↵] to activate "Manual Channel Preset".



Your setting will be activated.

WARNING:

- For the digital TV channels, you cannot recover the deleted channels once they are deleted unless you perform the auto channel preset again.

7 Press [SETUP] to exit.

SETTING THE CLOCK

Set the clock before you try the timer programming. If a PBS (public broadcasting station) is available in your area, follow "Auto Clock Setting" below. If not, follow "Manual Clock Setting" on page 28.

Auto Clock Setting

This unit can set the time and date automatically by referring to a PBS station.

Make sure

- The antenna/cable TV connections are correct.
- Channels are set. (Refer to page 24.)
- If this unit is connected to a cable/satellite box, select the local PBS station on them to set the clock automatically.



Note

- The clock may set itself automatically after you connect the antenna/cable signal and plug in the power cord.
- Only the analog PBS channel signal is effective for auto clock setting.
- The unit receives the clock data at 12:00 a.m. / p.m. from the PBS channel when the power is off.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

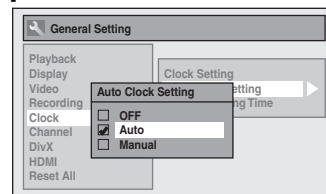
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Clock", then press [OK].

"Clock" menu will appear.

3 Use [▲ / ▼] to select "Auto Clock Setting", then press [OK].

4 Use [▲ / ▼] to select "Auto", then press [OK].



5 Press [SETUP] to exit.

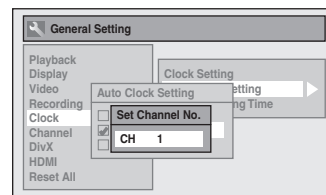
6 Press [STANDBY-ON] to turn off the unit.

This unit will search for the time only when the power is off. Leave it off for several minutes to give this unit time to set the clock.

If the unit chooses an incorrect PBS channel, set the PBS channel manually by following the steps below.

1 Select "Manual" at step 4, then press [OK].

2 Use [the Number buttons] or [▲ / ▼] to enter your PBS channel number, then press [OK].



3 Press [SETUP] and turn off the unit.

SETTING THE CLOCK

Manual Clock Setting

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

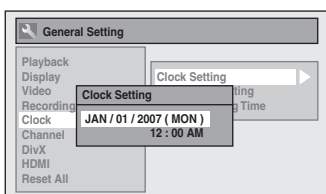
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Clock", then press [OK].

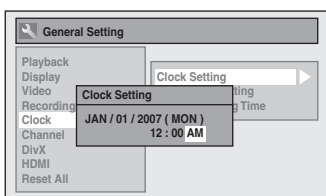
"Clock" menu will appear.

3 Use [▲ / ▼] to select "Clock Setting", then press [OK].

4 Use [▲ / ▼] to select calendar or time, then press [OK].



5 Use [◀ / ▶] to select an item to set, and use [▲ / ▼] to select the contents to suit your preference, then press [OK].



Your setting will be activated.

The clock start counting when you press [OK].

6 Press [SETUP] to exit.

Note

- Your clock setting will be lost if either there is a power failure or this unit has been unplugged for more than 30 seconds when you set the clock manually.
- For setting the day, year, hour, and minute, [the Number buttons] can also be used.
- You can set the built-in calendar from the year 2007 up to 2056.

Daylight Saving Time

When "Daylight Saving Time" is "ON", the unit clock will automatically adjust the time in order to fit the daylight saving time.

"ON (MAR - NOV)" has been selected as the default.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

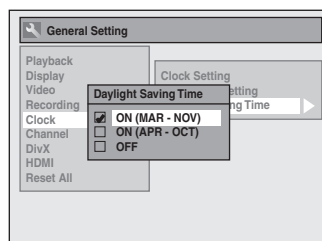
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Clock", then press [OK].

"Clock" menu will appear.

3 Use [▲ / ▼] to select "Daylight Saving Time", then press [OK].

4 Use [▲ / ▼] to select "ON (MAR - NOV)", "ON (APR - OCT)" or "OFF", then press [OK].



ON (MAR - NOV):

Move forward one hour on the second Sunday in March and move back one hour on the first Sunday in November.

ON (APR - OCT):

Move forward one hour on the first Sunday in April and move back one hour on the last Sunday in October.

5 Press [SETUP] to exit.

TUNER SETTINGS

Switching Analog Mode / Digital Mode

You can easily switch the analog TV (NTSC) and digital TV (ATSC) with the remote control and enjoy viewing the HDTV (high definition TV) programs as well as the SDTV (standard definition TV) programs.

Press **[DTV/TV]** on the remote control.

- The analog mode and digital mode switch alternately.

Note

- When you switch the analog mode to the digital mode, it may take about 10 seconds until the digital channel selection is completed. The following screen is displayed while switching the mode.



Channel Selection

Select channels by using **[CH + / -]** or **[the Number buttons]** found on remote control.

[CH + / -]

Use **[CH + / -]** to change the channel.

[the Number buttons]

Press the channel number with **[the Number buttons]** to select a channel you want to watch.

<Analog TV Channels>

Enter the channel number with **[the Number buttons]** to select a channel you want to watch.

For 1-digit number

e.g.) 2 ch: **[0] + [2], [2] + [•]** or **[2] + leave it for 2 seconds.**

For 2-digit number

e.g.) 12ch: **[1] + [2]**

<Digital TV Channels>

Enter the major and minor channel number with **[the Number buttons]** to select a channel you want to watch.

For 1-digit number

e.g.) 2-2 ch:
major channel **[0] + [2]** or **[2] + [•]**
minor channel **[0] + [2], [2] + [•]** or **[2] + leave it for 2 seconds.**

For 2-digit number

e.g.) 35-16ch:
major channel **[3] + [5]**
minor channel **[1] + [6]**

- If you enter 1 digit for major channel and leave it for 2 seconds, the number will be taken as the major channel and lowest minor channel of the major channel will be displayed.
- If there is no minor channel input, lowest minor channel of the major channel will be displayed.

Note

- It may take up to 5 to 7 seconds to switch the digital TV channels.
- In digital TV broadcasting, 2 or more channels, called minor channels, are simultaneously broadcast on one main channel, called major channel.

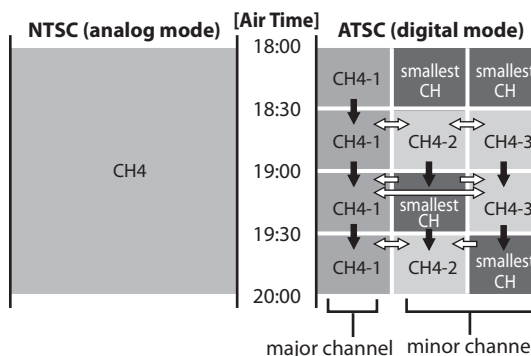
About digital TV broadcasting:

With its high definition broadcast, digital broadcasting far surpasses analog broadcasting in both its picture and sound quality.

What is the minor channel?

By using high compression technology, digital broadcasting offers a service that enables multiple signals to send simultaneously.

Therefore, you can select more than one program per major channel since digital broadcasting technology distinguishes between multiple channels broadcast by a signal network.



➡ : change automatically

⇔ : change manually by using **[CH + / -]**

TUNER SETTINGS

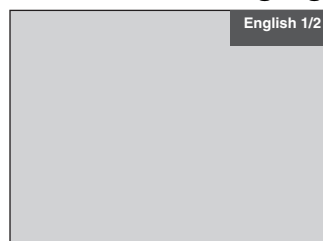
This section describes how to switch the TV audio. When you record a TV program, only the audio selected here will be recorded.

Selecting TV Audio

Digital TV



1 Press [AUDIO] to cycle through available audio languages.



- When you press **[AUDIO]**, selected language will be displayed on the TV screen.
- Every time you press **[AUDIO]**, the language will be switched.
e.g.) English 1/3 → Spanish 2/3 → Other 3/3
- Available languages differ depending on the broadcast.
- The language information display will automatically disappear.
- When you record digital TV broadcasting, the audio language you have selected will be recorded.

Note

- The timer recording for digital TV cannot record any audio language other than English.
- Pressing **[AUDIO]** does not control external device audio.
- When there is only one audio channel on the broadcast, pressing **[AUDIO]** does not display anything.

TUNER SETTINGS

Selecting TV Audio (cont'd)

Analog TV



1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

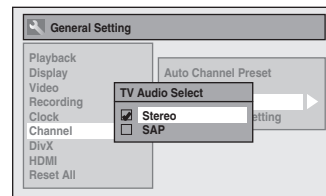
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Channel", then press [OK].

"Channel" menu will appear.

3 Use [▲ / ▼] to select "TV Audio Select", then press [OK].

4 Use [▲ / ▼] to select "Stereo" or "SAP", then press [OK].



Stereo:

Outputs main-audio.

SAP (secondary audio program):

Outputs sub-audio.

5 Press [SETUP] to exit.

Note on recording analog TV audio

• When you record an analog TV program available in second audio or stereo, you have to select either "Stereo" or "SAP" in "General Setting" menu beforehand. Refer to the following table to check an appropriate setting.

Selected audio	Broadcast audio	Disc recording	Audio output
Stereo	STEREO+SAP	STEREO	STEREO
	STEREO	STEREO	STEREO
	MONO+SAP	MONO	MONO
	MONO	MONO	MONO
SAP	STEREO+SAP	SAP	SAP
	STEREO	STEREO	STEREO
	MONO+SAP	SAP	SAP
	MONO	MONO	MONO

TUNER SETTINGS

DTV Closed Caption

Digital TV

Digital TV has its own closed captions called DTV CC. Use this menu to change the settings for DTV CC.

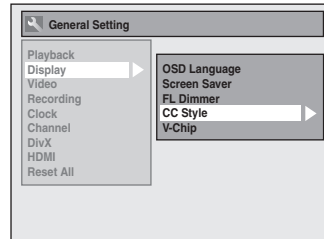


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

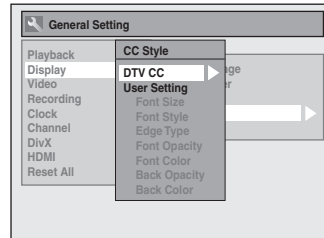
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Display", then press [OK].

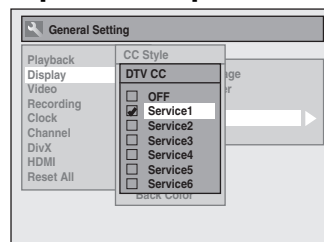
3 Use [▲ / ▼] to select "CC Style", then press [OK].



4 Use [▲ / ▼] to select "DTV CC", then press [OK].



5 Use [▲ / ▼] to the desired DTV closed caption, then press [OK].



OFF:

Select if you do not want DTV CC. This is the default.

Service 1 to Service 6:

Select one of these before changing any other item in the closed caption menu. Choose "Service 1" under normal circumstances.

6 Press [SETUP] to exit.

Note

- Even if you set "DTV CC" to anything other than "OFF", its effect will temporarily be canceled while recording.

TUNER SETTINGS

Closed Caption Style

Digital TV

Digital TV can also change the style of its closed caption such as font, color or size, etc.

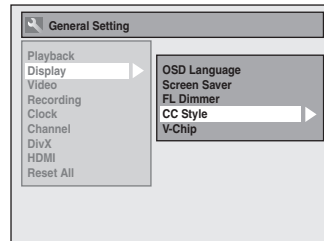


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

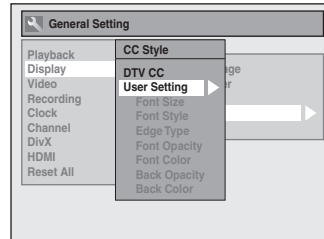
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Display", then press [OK].

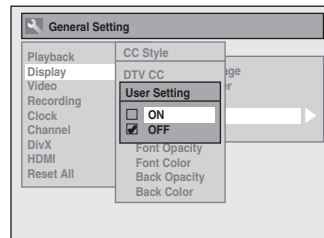
3 Use [▲ / ▼] to select "CC Style", then press [OK].



4 Use [▲ / ▼] to select "User Setting", then press [OK].



5 Use [▲ / ▼] to select "ON", then press [OK].



Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

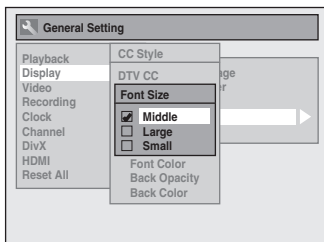
Instructions continue on the next page.

TUNER SETTINGS

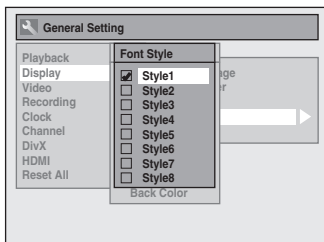
6 Use [▲ / ▼] to select the item and switch the setting for each item you want to set, then press [OK].

- When "User Setting" is set to "ON", you can set the following items. CC style set by "User Setting" will be displayed.
- The setting description for each item is shown below.

Font size of the displayed caption can be switched as below.

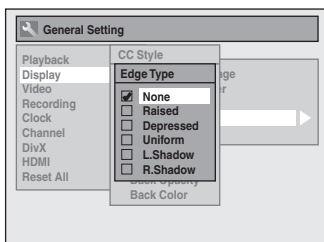


Font style of the displayed caption can be switched as below.

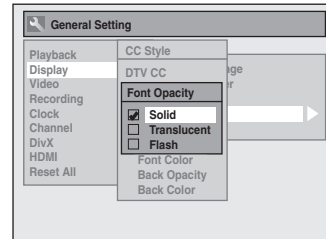


<Edge Type>

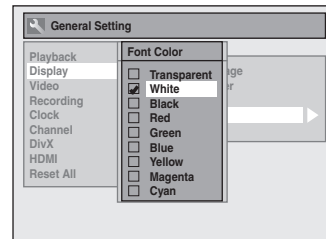
Edge type of the displayed caption can be switched as below.



Font opacity of the displayed caption can be switched as below.

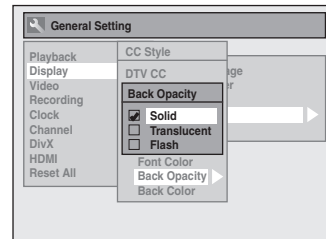


Font color of the displayed caption can be switched as below.



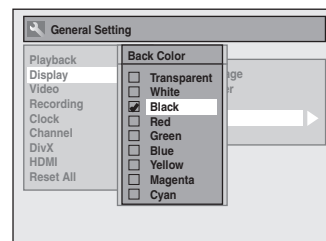
<Back Opacity>

Background opacity of the displayed caption can be switched as below.



<Back Color>

Background color of the displayed caption can be switched as below.









7 Press [SETUP] to exit.

INFORMATION ON DVD RECORDING

Before you make a recording, read the following information.

Recordable Discs

This unit can record to DVD+RW, DVD+R, DVD-RW and DVD-R.
 DVD+R/DVD-R can only be recorded to once. DVD+RW/DVD-RW can be recorded to and erased many times.
DVD-RW/-R will be recorded in the DVD+VR mode automatically in this unit.

Logo	Attributes
 DVD+ReWritable DVD+RW	8cm/12cm, single-sided, single layer disc Approx. max. recording time (SLP mode): 360 minutes (4.7GB) (for 12cm) 108 minutes (1.4GB) (for 8cm)
 DVD+R	
 DVD-RW	
 DVD-R	
 DVD-RW	
 DVD-R	

• Following discs are recommended for good recording quality and are proven to be compatible with this unit. However, depending on the media condition the unit may not read the disc properly.

Verbatim	DVD+R 8x,	DVD+RW 4x,
	DVD-R 8x,	DVD-RW 2x
JVC	DVD-RW 4x	
Maxell	DVD+R 4x/8x/16x,	DVD-R 8x/16x
SONY	DVD+R 4x/8x/16x,	DVD+RW 4x
TDK	DVD+R 4x/8x/16x	

Performance of any other discs are not guaranteed.

• **You can play back DVD+RW on most DVD players without finalizing. However, if you have added or deleted chapters, or made chapters hidden, you must perform "Make Edits Compatible" before being able to see those effects on other units. (Refer to page 83 for more details.) To play back discs other than DVD+RW on other DVD players, you will need to finalize.**

Unrecordable Discs

- DVD-RW recorded in the mode other than +VR is not recordable on this unit unless you erase all contents in the disc (refer to page 82).
- DVD-R recorded in the mode other than +VR is not recordable on this unit.

Recording Mode

You can select a recording mode among 6 options, and the recording time will depend on the recording mode you select as follows.

Disc size	Recording mode	Recording time	Video/sound quality
8cm Disc	HQ (1Hr)	18 min	☆☆☆☆☆☆ (good)
	SP (2Hr)	36 min	☆☆☆☆☆
	SPP (2.5Hr)	45 min	☆☆☆☆
	LP (3Hr)	54 min	☆☆☆
	EP (4Hr)	72 min	☆☆
	SLP (6Hr)	108 min	☆ (poor)
12cm Disc	HQ (1Hr)	60 min	☆☆☆☆☆☆ (good)
	SP (2Hr)	120 min	☆☆☆☆☆
	SPP (2.5Hr)	150 min	☆☆☆☆
	LP (3Hr)	180 min	☆☆☆
	EP (4Hr)	240 min	☆☆
	SLP (6Hr)	360 min	☆ (poor)

- The recording time is only an estimate. The actual recording time may differ.
- The audio and video quality gets poorer as the recording time becomes longer.
- Each time [REC MODE] is pressed, recording mode and its allowed recording time will be displayed.

Note

- **This unit cannot record to CD-RW or CD-R.**
- All high definition pictures will be down converted to the standard definition pictures when they are recorded on this unit.
- DVD+RW/+R, DVD-RW/-R and CD-RW/-R recorded on a personal computer or a DVD or CD recorder may not be played back if the disc is damaged or dirty or if there is condensation on the player's lens.
- If you record a disc using a personal computer, even if it is recorded in a compatible format it may not be played back because of the settings of the application software used to create the disc. (Check with the software publisher for more detailed information.)
- Since the recording is made by the VBR (variable bit rate) method, depending on the picture you are recording, the actual remaining time for recording may be a little shorter than the remaining time displayed on the TV screen.
- You cannot record copy-protected program using this unit. (Copy-protected signal is included in DVD-video or some satellite broadcasts.)
- You cannot record "copy-once only" program on DVD.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

BEFORE RECORDING

Make Recording Compatible



Use this feature to make the unfinalized +VR mode discs recorded on other unit recordable on this unit. When you make an additional recording on this unit with "Make Recording Compatible" set to "ON", the title list is automatically converted to our style.

1) Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

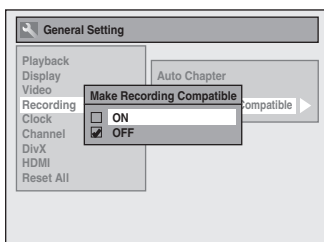
"General Setting" menu will appear.

2) Use [▲ / ▼] to select "Recording", then press [OK].

"Recording" menu will appear.

3) Use [▲ / ▼] to select "Make Recording Compatible", then press [OK].

4) Use [▲ / ▼] to select "ON" or "OFF", then press [OK].



ON: Title list will be replaced when you make additional recordings to the discs recorded by other units.

OFF: Prohibiting additional record to the disc that has a title list created by other units.

5) Press [SETUP] to exit.

Setting for Auto Chapter

You can set a specified time for chapter marks.

1) Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

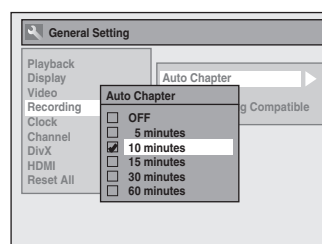
"General Setting" menu will appear.

2) Use [▲ / ▼] to select "Recording", then press [OK].

"Recording" menu will appear.

3) Use [▲ / ▼] to select "Auto Chapter", then press [OK].

4) Use [▲ / ▼] to select a desired time option, then press [OK].



5) Press [SETUP] to exit.


Note


- The interval for auto chapter marks may slightly differ.
- A blank chapter may be created depending on the remaining time of the disc.

BASIC RECORDING & ONE-TOUCH TIMER RECORDING

Follow the steps to record TV programs.



1 Press [STANDBY-ON ].
Turn on the TV and be sure to select the input to which the unit is connected.


2 Press [OPEN/CLOSE ] to open the disc tray and insert your disc with its label facing up.



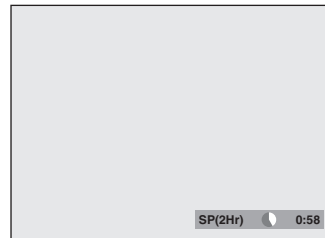
* Make sure the disc is compatible with this unit.
(Refer to page 35 for the list of compatible discs.)

3 Press [OPEN/CLOSE ] to close the disc tray.

It may take a while to load the disc completely.

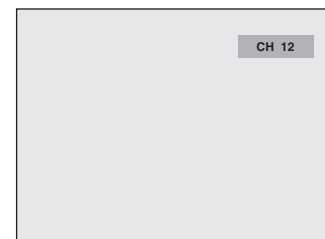
- When inserting a brand-new DVD+RW/DVD-RW, the unit automatically starts to format.
- If titles have been recorded on the disc, the title list is displayed. Press [STOP ] to exit the title list.

4 Press [REC MODE] to select a recording mode.
Refer to "Recording Mode" on page 35.



5 Press [DTV/TV] to select analog TV or digital TV, then use [CH + / -] or [the Number buttons] to select a desired channel to record.

Refer to "Switching Analog Mode/Digital Mode" and "Channel Selection" on page 29.



Instructions continue on the next page.

Introduction

Connections

Basic Setup

Recording

Playback

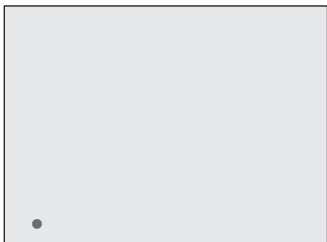
Editing

Function Setup

Others

BASIC RECORDING & ONE-TOUCH TIMER RECORDING

6 Press [REC ●] to start recording. "●" will be displayed for 5 seconds.

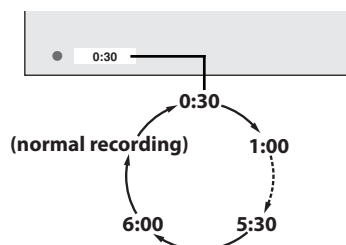


Press [PAUSE III] to pause recording.
Press [PAUSE III] or [REC ●] again to restart recording.

To set one-touch timer recording (OTR)...

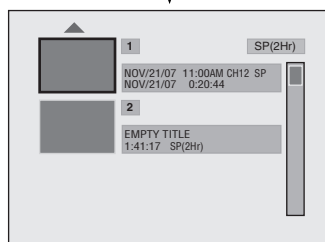
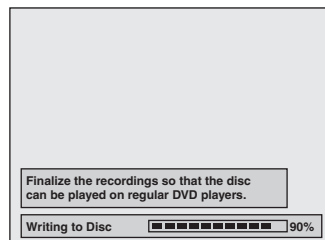
This is a simple way to set the recording time in blocks of 30 minutes.

Press [REC ●] repeatedly until the desired recording time (30 minutes to 6 hours) appears on the TV screen. One-touch timer recording will start.



• To cancel one-touch timer recording within the specified time, press [STOP ■].

7 Press [STOP ■] to stop recording. The recorded title will appear in the title list. (Refer to "Guide to a Title List" on page 71.) e.g.) DVD+R



• Press [STOP ■] to exit the title list.

Note

- When you press [REC ●], recording starts immediately and continues until the disc is full or you stop recording.
- This unit cannot record images as aspect ratio of 16:9. The 16:9 images will be recorded as 4:3.
- When the unit clock has not been set, the space for a date and time of title names will be blank.
- When you record a TV program, you have to select the TV channel audio beforehand. Only the selected channel audio will be recorded. Refer to "Selecting TV Audio" on pages 30-31 for more details.
- This unit cannot record in both stereo and SAP (secondary audio program) at the same time.
- You cannot change the recording mode during the recording pause mode.
- You can change a channel to be recorded during the recording pause mode.

Note for one-touch timer recording

- The remaining recording time will be displayed on the front panel display during one-touch timer recording. Press [INFO] to see it on the TV screen.
- Unlike the timer recording, you can perform the following operations during one-touch timer recording.
 - Turning off the power to stop one-touch timer recording.
 - Using [REC ●] or [STOP ■] on the remote control.
- You cannot use the pause function during one-touch timer recording.
- When one-touch timer recording is finished and the power is turned off, the unit will switch to the timer-standby mode automatically if a timer recording has been programmed. Press [STANDBY-ON ○] to cancel the timer-standby mode to use the unit continuously.

TIMER RECORDING

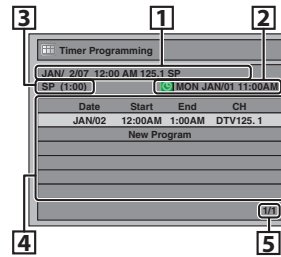
You can program the unit to record up to 12 programs within a month in advance. Daily or weekly program recordings are also available.

Before recording, make sure

- Set the clock before setting a timer programming.
- Insert a recordable disc with enough recordable space.



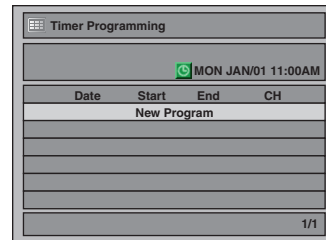
Guide to Timer Programming Display



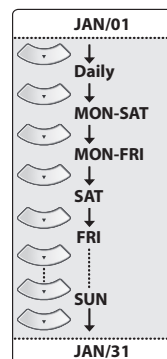
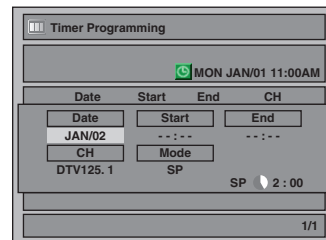
- 1 Title of a timer program (Contains date, time, channel, recording mode of the program)
- 2 Current date and time
- 3 Recording mode, and length of the recording
- 4 Timer program list
- 5 Total number of pages and current page (2 pages maximum)

1 Press [TIMER].

2 Use [▲ / ▼] to select "New Program", then press [OK].



3 Use [▲ / ▼] to enter the date, then press [▶].



When pressing [▼] at the current date, the date will change as follows.
e.g.) January 1st

Note

- **If you have not set the clock yet:**
"Clock Setting" menu will appear instead of the timer programming list at step 1. Continue with the step 4 in "Manual Clock Setting" on page 28 before setting a timer programming.
- Use [◀ / ▶] to move the cursor to the left and the right in "Timer Programming" menu.

Instructions continue on the next page.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

TIMER RECORDING

- 4** Use [▲ / ▼] or [the Number buttons] to enter the start and end time, then press [▶].

Date	Start	End
JAN/02	12 : 00AM	- - - -
CH	Mode	
DTV125.1	SP	SP 1 : 00
1/1		

- 5** Use [▲ / ▼ / ◀ / ▶] to select analog (" - - - ") / digital ("DTV") mode or external input (E1 / E2), then press [▶].

e.g.) external input mode

Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
CH	Mode	
E1	SP	SP 1 : 00
1/1		

To record from external input (e.g., cable/satellite box), select E1 or E2.

Use [▲ / ▼] to select the channel number to record.

For digital mode, select both major and minor channels. Refer to "How to select a channel number for the timer recording" on page 41 for more details.

e.g.) analog mode

Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
CH	Mode	
10	SP	SP 1 : 00
1/1		

e.g.) digital mode

Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
CH	Mode	
DTV125.1	SP	SP 1 : 00
1/1		

- 6** Use [▲ / ▼] to select a recording mode.

Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
CH	Mode	
DTV125.1	SP	SP 1 : 00
1/1		

Refer to "Recording Mode" on page 35.

- You can check the remaining recordable space of the disc when you select the recording mode.

Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
CH	Mode	
DTV125.1	SP	SP 1 : 00
1/1		

Auto recording mode select...

When "Auto" is selected as a recording mode, the unit calculates how much time is available on the disc and determines the appropriate recording mode to complete recording the program.

Date	Start	End
JAN/02	12 : 00AM	1 : 00AM
CH	Mode	
DTV125.1	Auto	Auto 0 : 00
1/1		

- "Auto" is only available for one program in the timer program list.
- The recording may be cut short when the available recording space of the disc is too limited.

- 7** Press [OK] when all items are entered.

After displaying a warning message for a few seconds, timer program list will appear.

Press STANDBY-ON to Timer Standby mode.

Timer Programming			
JAN/ 2/07	12:00 AM	125.1 SP	
SP (1:00)		MON JAN/01 11:00AM	
Date	Start	End	CH
JAN/02	12:00AM	1:00AM	DTV125.1

Your program setting is now stored.

- To set another program, repeat steps 2 to 7.
- To exit, press [TIMER] or [SETUP].
- When 2 or more programs are overlapped, "Timer program overlapped" appears, and the overlapped program will be displayed in blue.
- To correct the timer program refer to "Checking, canceling, or correcting the timer programming information" on page 41.

- 8** Press [STANDBY-ON] to set a timer programming.

- Press [STOP] to stop recording.

TIMER RECORDING

How to select a channel number for the timer recording

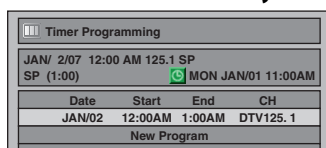
Analog TV	For channel number 2-6 press, press [▶] or [•] to decide the channels. For other channels (7-69), the channel will be decided as soon as you enter the channel number.
Analog CATV	For channel number 1-12 press, press [▶] or [•] to decide the channels. For other channels (13-125), the channel will be decided as soon as you enter the channel number.
Digital TV	For channel number 1-9 press, press [▶] or [•] to decide the channels. For other channels (10-99), the channel will be decided as soon as you enter the channel number.
Digital CATV	For channel number 1-13 press, press [▶] or [•] to decide the channels. For other channels (14-135), the channel will be decided as soon as you enter the channel number.
minor channels	For channel number 1-9 press, press [▶] or [•] to decide the channels. For other channels (10-99), the channel will be decided as soon as you enter the channel number.

<Hint>

- You can decide the 1-digit channel number by pressing 0 first, then enter desired 1-digit channel number.
e.g.) "5": [0]+[5]
- For selecting the channels with [▲ / ▼] you need to press [▶] or [•] to decide the channel number.
- For selecting the minor channels with [▲ / ▼], please make sure the minor channel you are selecting is existed. [▲ / ▼] does not skip the non-existed minor channels.

Checking, canceling, or correcting the timer programming information

- 1) Press [STANDBY-ON ○].
- 2) Press [TIMER].
- 3) Check the information on the list you will need.

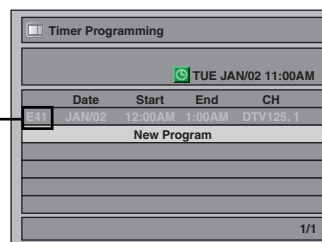


- 4-A) To delete the timer program:
 - 1 Use [▲ / ▼] to select the program you want to delete, then press [OK].
 - 2 Use [▲ / ▼] to select "Delete", then press [OK]. Confirmation window will appear.
 - 3 Use [▲ / ▼] to select "Yes", then press [OK].
- 4-B) To correct the timer program:
 - 1 Use [▲ / ▼] to select the program you want to correct, then press [OK].
 - 2 Use [▲ / ▼] to select "Program Change", then press [OK].
 - 3 Correct the timer program by using [▲ / ▼ / ◀ / ▶], then press [OK].
- 5) Press [TIMER] to exit.
- 6) Press [STANDBY-ON ○] to return to the timer standby mode.

Note

- Press [TIMER] to check the timer recording in progress. When the timer recording is proceeding, that program will be highlighted with red. In this case, you cannot select any other program.

If the timer program did not complete correctly, the error number appears in the timer programming list.














Each error number means:

E1-22 E37-39	Recording error other than below	E41	Power failed
E24	Unrecordable disc	E42	No disc when recording
E25-26	Copy prohibited program	E43	Already 49 titles recorded
E29	Disc protected	E44	Already 254 chapters recorded
E30	Disc full	E45	Copy prohibited program
E35	PCA full *1	E46	It is impossible to record additionally on a disc recorded by other units when setting "Make Recording Compatible" to "OFF".
E36	Already finalized video format disc		
E40	Some portion has not been recorded because of program overlapping. Recording did not start at the start time.		

- E23, E27, E28, E31, E32, E33 and E34 are not displayed.
- A program with the error number is grayed in the timer programming list.
- Once the timer programming list with error line(s) is displayed, or after canceling and setting again the timer standby mode, the program line(s) with error will be cleared.
- *1 PCA is a disc's space reserved for recording test.

TIMER RECORDING

Hints for Timer Recording

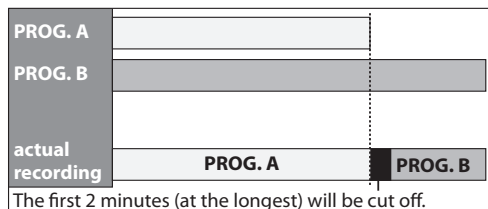
- If there is a power failure or this unit has been unplugged for more than 30 seconds, the clock setting and all timer programming will be lost.
- If a disc is not inserted,  flashes and timer recording cannot be performed. In some cases,  will appear momentarily around the start point as the unit attempts to record. Please insert a recordable disc.
- When all the timer recording is completed,  flashes. To play back or eject the recorded disc, press [STANDBY-ON ] first, then select the recorded title and press [PLAY ], or [OPEN/CLOSE ] to remove the disc.
- During timer recording or timer standby mode ( will appear), any operations on the unit will not be available. To make these operations available, press [STOP ] to cancel the timer recording or [STANDBY-ON ] to release timer standby mode ( will disappear).
- To cancel the timer standby mode, press [STANDBY-ON ].
- When the starting and the ending time are the same, the length of the recording will be set for 24 hours. When the disc becomes full during the recording, the unit turns itself off.
- When the programmed starting and ending time are earlier than the current time, the setting will not be accepted and be cleared for redoing.
- If the starting time is earlier and the ending time is later than the current time, the recording will start right after you turn the power off.
- The timer recording for digital TV cannot record any audio language other than English.
- "Press STANDBY-ON for timer recording" will appear if a timer recording is programmed to start in 5 minutes but the unit is not in standby mode.

The Priority of Overlapped Settings

- Timer program which has the earlier start time will be placed first in the timer program list, and be given priority over the programs with the later start time when timer programs overlap.
- When timer programs overlap, the first 2 minutes (at the longest) of the later recording will be cut off.
- When two or more timer programs have the same start time, the program set first will be given priority.
- A timer recording of lower priority will be canceled or start from the middle.
- Check the overlapped timer programmings and change the priority if necessary.

■ When the starting time is the same:

A program set previously (PROG. A) has priority.

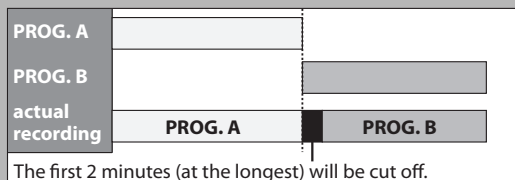


Note for DVD recording

- When the recording time of 2 programs are overlapped, or the end time of a program and the start time of another program is the same, the first 2 minutes (at the longest) of the subsequent program will be cut off.
- If the cut-off portion comes up to 3 minute or more, this program will be displayed with error number E40 in the timer programming list.

■ When the end time of the programming currently being recorded and the start time of the subsequent program are same:

The beginning of the PROG. B may be cut off.



OVERWRITING UNNECESSARY TITLE

Overwriting from the Beginning of the Title



You can overwrite the existing title from the beginning.

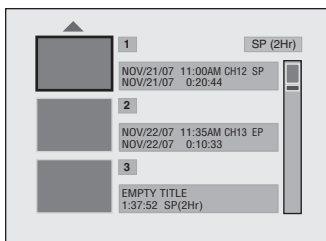
- 1) Press **[STANDBY-ON ○]**.
Make sure that the TV input is set on the unit.
- 2) Load the disc that includes a title to be overwritten.

It takes a while to display the title list.

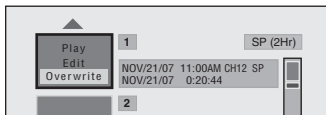
Title list will appear.

If the title list does not appear, press **[TITLE]**.

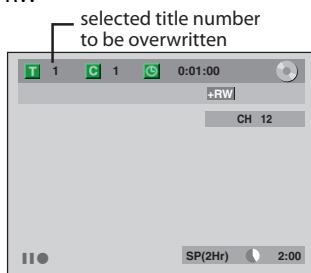
- 3) Press **[REC MODE]** to select a recording mode.
Refer to "Recording Mode" on page 35.
- 4) Use **[▲ / ▼]** to select a title to be overwritten, then press **[OK]**.



- 5) Use **[▲ / ▼]** to select "Overwrite", then press **[OK]**.



- 6) Select the channel you want to record.
(Refer to page 29 on how to select a channel.)
e.g.) DVD+RW



- 7) Press **[REC ●]**.
Overwriting recording starts.
The elapsed-time counter starts running.

- 8) Press **[STOP ■]** to stop recording.
Title name is also overwritten.

This operation may take a while to be completed.

Note

- The remaining recording time is displayed on the bottom right corner of the TV screen during overwriting.

Overwriting in the Middle of the Title



You can overwrite the existing title from the selected position.

- 1) Follow the steps 1, 2 and 4 on the left.
- 2) Use **[▲ / ▼]** to select "Play", then press **[OK]**.
Playback will start.
- 3) Press **[PAUSE II]** at the point from which you want to start overwriting.
- 4) Press **[REC ●]**.
"II●", display menu, channel, and the time lapse will be displayed as illustrated on the left.
- 5) Select the channel you want to record.
(Refer to page 29 on how to select a channel.)
- 6) Press **[REC ●]** again.
Overwriting recording starts.
- 7) Press **[STOP ■]** to stop recording.

This operation may take a while to be completed.

Note

- Recording mode of the overwriting title is the same as that of the original (overwritten) title when overwriting in the middle of the title.
- Title name will not be overwritten.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

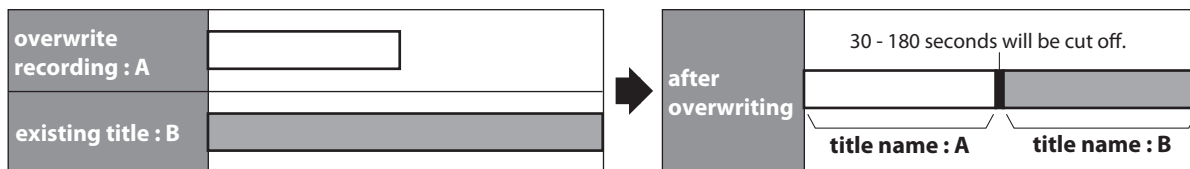
Others

OVERWRITING UNNECESSARY TITLE

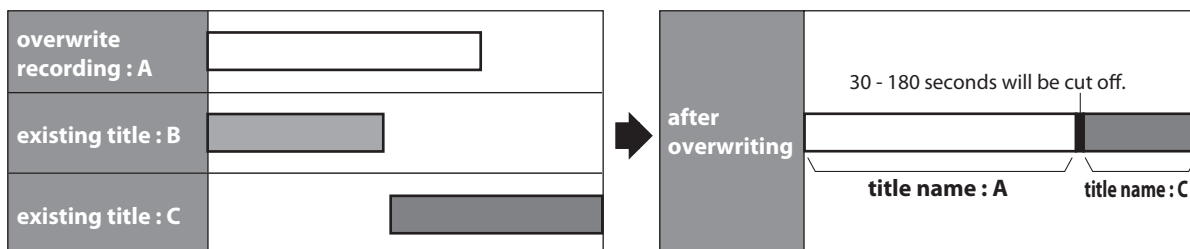
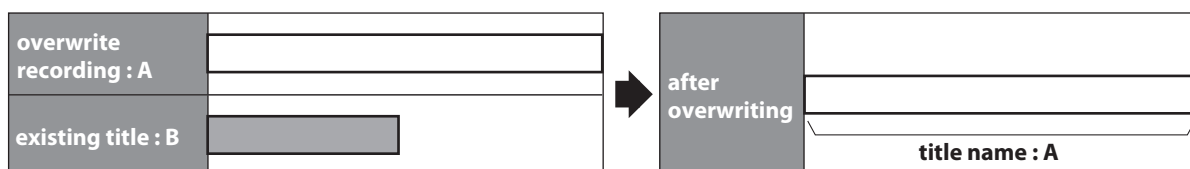
Hints for Overwriting

When you overwrite on the unnecessary title, there were various circumstances such as follows. Please note that following cases only describe the overwriting without any recording mode discrepancy. To avoid accidental deletion please check if there is no important title after the overwriting point.

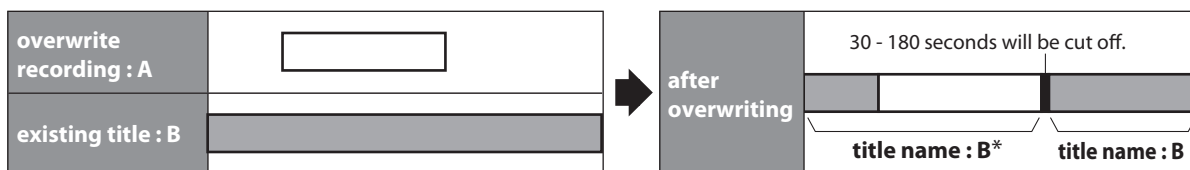
- When overwriting title is shorter than the existing title:**
(overwriting from the beginning of the title)



- When overwriting title is longer than the existing title:**
(overwriting from the beginning of the title)



- When overwriting in the middle of the title:**



*Overwritten section and the rest of the sections will have the same title name as the original existing title (B).

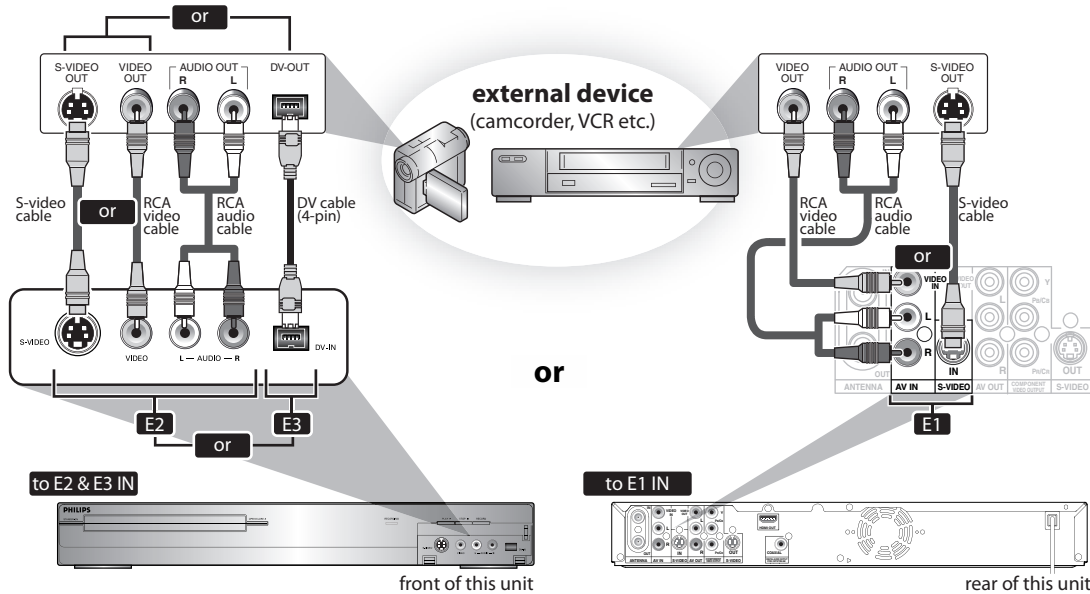
Note

- When a title name is overwritten, its thumbnail is also overwritten.
- "Auto Chapter" interval time is reset at the overwriting start point.
- A chapter mark is put the beginning of the overwrite title when overwriting in the middle of the title.

SETTINGS FOR AN EXTERNAL DEVICE

Connection to an External Device

Connect the external device properly to the unit by using input jacks either E2 and E3 (Front) or E1 (Rear).
 When connecting an external device of monaural output to this unit, use AUDIO L jack of E2 (Front).
 Use S-video or the RCA audio/video cables for this connection.
 When connecting a DV-camcorder, use DV-IN jack of E3 (Front) instead of S-VIDEO IN or VIDEO IN jack.



Supplied cables used in this connection are as follows:

- RCA audio cable (L/R) x 1
 - RCA video cable x 1
- Please purchase the rest of the necessary cables at your local store.

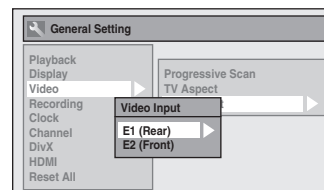


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].
 "General Setting" menu will appear.

2 Use [▲ / ▼] to select "Video", then press [OK].
 Submenu will appear.

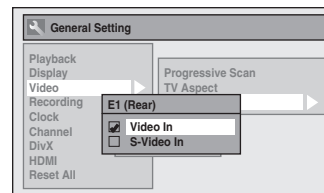
3 Use [▲ / ▼] to select "Video Input", then press [OK].

4 Use [▲ / ▼] to select desired external input position, then press [OK].



5 Use [▲ / ▼] to select the input jack type to connect, then press [OK].
 If you want to use VIDEO IN jack, select "Video In".

If you want to use S-VIDEO IN jack, select "S-Video In".



6 Press [SETUP] to exit.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

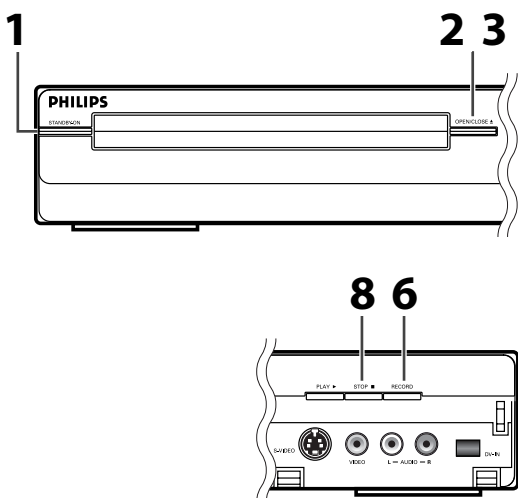
Function Setup


Others


SETTINGS FOR AN EXTERNAL DEVICE

Recording from an External Device

Before recording from an external device, refer to the instructions for the connection on page 45.



1 Turn on the TV and press [STANDBY-ON , and be sure to select the input of the TV to which the unit is connected.

2 Press [OPEN/CLOSE ] to open the disc tray. Place the disc to record properly.

3 Press [OPEN/CLOSE ] to close the disc tray.

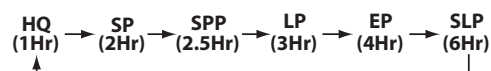
It takes a while to load the disc.

4 Select the input of the unit which the external device is connected. (E2, E3 or E1)

- To use the input jacks on the rear of this unit; Select "E1 (Rear)" position by using [SOURCE] or [CH + / -].
- To use the input jacks on the front of this unit; Select "E2 or E3 (Front)" position by using [SOURCE] or [CH + / -].
- As for E2 and E1, you can also select external input position by using [the Number buttons]. e.g.) For E1, press [0], [0], [1].

5 Press [REC MODE] to select a recording mode.

Refer to "Recording Mode" on page 35.



6 Press [RECORD] on the unit to start recording.

7 Start playback on the external device to record from.

8 Press [STOP ] on the unit to stop recording.

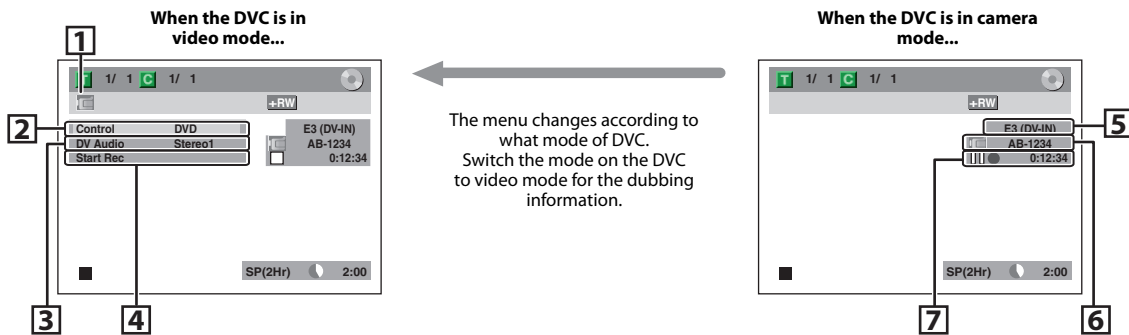
This operation may take a while to be completed.

DV DUBBING

Guide to DV and On-Screen Display

This function helps you to easily dub the contents of the DVC (digital video camcorder) to DVD.

You can control basic operations of the DVC from the remote control of this unit such as playback, fast forward or reverse and stop all operations if the DVC is in video mode. Use the DV cable that has 4-pin input jack and is compliance with the IEEE1394 standards. When you connect to DV-IN jack on the front of this unit, select "E3" position by using [SOURCE] or [CH + / -] on the remote control and press [INFO] to show the DV dubbing information for the operating your DVC.



The following instructions are described with the operations using the remote control of this unit.

1. DV icon

2. Indicator of active device

- When the "Control" is highlighted, press [OK] to display the item selection. Use [▲ / ▼] to select the device you wish to operate, then press [OK] to activate.
- Select "DVD" to control this unit.
- Select "DV Input" to control your DVC.

3. Recording audio mode

- Other than the DV camcorder is in stop mode, the "DV Audio" can be selected. Press [OK] to display the item selection and then use [▲ / ▼] to select the audio you wish to output. Press [OK] again to activate.
- Select "Stereo1" to dub the stereo sound.
- Select "Stereo2" to dub the sound with after recording sound.
- Select "Mix" to dub the stereo1 and stereo2.

4. Indicator of dubbing function

- When the unit is ready for dubbing, "Start Rec" will appear.
- When the unit is in dubbing, "Pause Rec" will appear.

5. Channel position

- When you select "E3" by using [SOURCE] or [CH + / -], "E3 (DV-IN)" will appear.

6. Product name of your DVC

- If the unit cannot recognize the input signal from the DVC or the unknown product, "No Device" or "*****" will appear instead.

7. Status of the current operation and the time counter

Each icon means (Available icons may vary depending on the DVC):

- | | | | |
|--------------------------|---|------|--|
| <input type="checkbox"/> | DVC is in stop mode. | ▶▶▶ | DVC is fast forwarding. (in stop mode) |
| ▶ | DVC is in playback mode. | ◀◀◀ | DVC is fast reversing. (in stop mode) |
| | DVC is in pause mode. | ▶◀ | DVC is fast reversing. (standard speed) |
| ▶▶ | DVC is fast forwarding. (standard speed) | ▶◀◀ | DVC is fast reversing. (faster than above) |
| ▶▶▶ | DVC is fast forwarding. (faster than above) | ▶◀◀◀ | DVC is fast reversing. (faster than above) |
| ▶▶▶▶ | DVC is fast forwarding. (faster than above) | ▶ | DVC is in slow reverse playback. |
| ▶▶▶▶▶ | DVC is slow forwarding. (standard speed) | ● | DVC is in recording. |
| ▶▶▶▶▶▶ | DVC is slow forwarding. (faster than above) | ● | DVC is in recording pause mode. |
| ▶▶▶▶▶▶▶ | DVC is slow forwarding. (faster than above) | | |

DV DUBBING

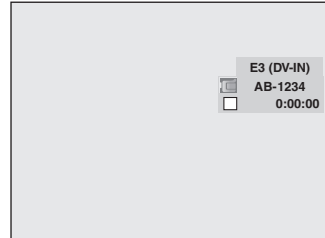
DVC to DVD Dubbing

Before recording from DVC, refer to page 45 for connection instructions.

Insert a recordable media and make sure your DV camcorder is in video mode.



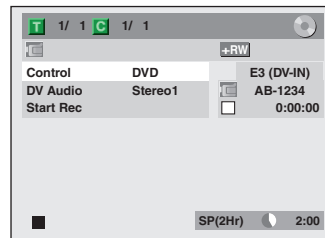
1 Use [SOURCE] or [CH + / -] to select "E3 (DV-IN)".



2 Press [REC MODE] to select a recording mode.
(Refer to page 35.)

3 Press [INFO].

4 Press [OK] to display the item selection. Use [▲ / ▼] to select "DV Input", then press [OK].



DV DUBBING

5 Press [PLAY ►] to find the point where you wish to start dubbing. Then, press [STOP ■] where you wish to start dubbing.

6 Use [▲ / ▼] to select "Start Rec", then press [OK].
The dubbing will start.

7 To stop dubbing;
Use [▲ / ▼] to select "Control", then press [OK].
Use [▲ / ▼] to select "DVD", then press [OK].
Then press [STOP ■].

Note for DV dubbing

- If you press [PAUSE III] at step 5, the tape will rewind to the point a few seconds preceding the paused point when you press [OK] at step 6, then, it will start dubbing when it comes to the paused point.
- The unit does not send out the output signal to DVC.
- For the proper operation, connect DVC to the unit directly. Do not connect this unit and DVC via any other unit.
- Do not connect more than 1 DVC.
- The unit can only accept DVC. Other DV device such as cable/satellite box or D-VHS VCR cannot be recognized.
- If no video signal is detected from the DVC during DVC to DVD dubbing, the recording will be paused and "●" will flash on the TV screen. The recording will resume when the unit detects the video signal again.
- When the DVC is in camera mode, refer to "Guide to DV and On-Screen Display" on page 47.
- You cannot dub from DVC during timer standby mode.
- Date / time and cassette memory data will not be recorded.
- Pictures with a copy-guard signal cannot be recorded.
- A DV terminal is a terminal that can use the transmission mode conforming to the IEEE 1394 standards called "Fire Wire". It enables digital dubbing between DV devices with little degradation.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

SETTING A DISC TO PROTECT

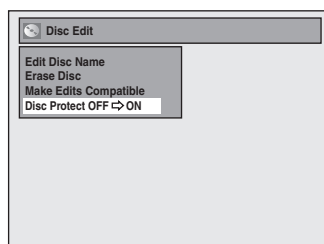
To prevent accidental recording, editing or erasing the titles, you can protect them from "Disc Edit" menu.



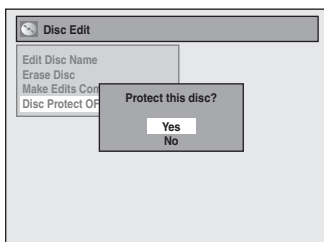
1 Press [SETUP].

2 Use [▲ / ▼] to select "Disc Edit", then press [OK].

3 Use [▲ / ▼] to select "Disc Protect OFF → ON", then press [OK].
e.g.) DVD+RW



4 Use [▲ / ▼] to select "Yes", then press [OK].



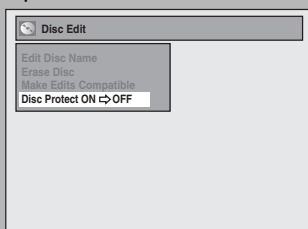
A disc will be protected.

This operation may take a while to be completed.

Note

To cancel the disc protect:

- When you insert a disc protected with this unit, "Disc Protect ON → OFF" will appear instead of "OFF → ON" at step 3.



To release the protect for the disc, select "Yes" at step 4.

PLAYING THE DISCS ON OTHER DVD PLAYERS

Finalizing a Disc



You will need to finalize DVD+R, DVD-RW or DVD-R to play them back on other DVD players.

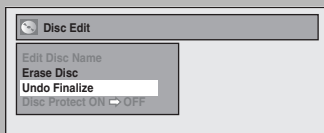
Finalizing may take several minutes up to an hour.

A shorter recording period on the disc will require a longer time period for finalization. Do not unplug the power cord during finalization.



Note

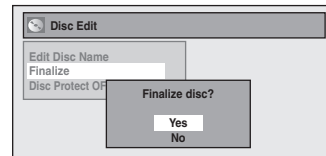
- Once you have finalized a DVD+R/DVD-R, you cannot edit or record anything on that disc.
- There is no need to finalize DVD+RW.
- When you insert a DVD-RW finalized with this unit, "Undo Finalize" will appear instead of "Finalize".



To release the finalizing for the disc, select "Undo Finalize" at step 3.

* DO NOT power off during finalization, this will result in malfunction.

- 1 Press [SETUP].**
If you are in the title list, you need to exit from the list by pressing [STOP ■] before you are able to access the main menu.
- 2 Use [▲ / ▼] to select "Disc Edit", then press [OK].**
"Disc Edit" menu will appear.
- 3 Use [▲ / ▼] to select "Finalize", then press [OK].**
- 4 Use [▲ / ▼] to select "Yes", then press [OK].**
e.g.) DVD+R, DVD-R

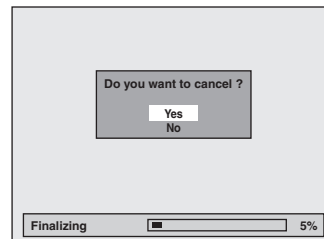


Finalizing will start.



To cancel finalizing... (DVD-RW only)

- To cancel finalizing at step 4, press [STOP ■], select "Yes" with [▲ / ▼], then press [OK]. Finalizing is canceled and the unit will be in stop mode.



- If Ⓞ appears when pressing [STOP ■], you cannot cancel finalizing because the finalizing has been in certain progress.
- When selecting "No" and press [OK] or [BACK ↶], finalizing will be continued.
- You cannot cancel finalizing the DVD+R/DVD-R once it has started.

This operation may take a while to be completed.

- 5 Finalizing is completed.**

PLAYING THE DISCS IN OTHER DVD PLAYERS

Auto Finalizing



You can finalize discs automatically using this function. You can use this function to finalize discs after finishing all timer recordings and at the end of the disc space.



1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

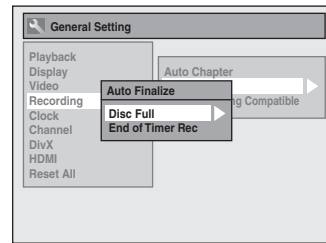
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Recording", then press [OK].

"Recording" menu will appear.

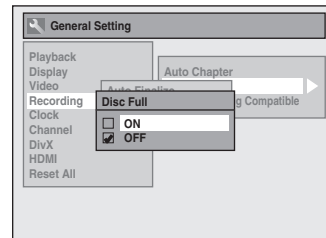
3 Use [▲ / ▼] to select "Auto Finalize", then press [OK].

4 Use [▲ / ▼] to select "Disc Full" or "End of Timer Rec", then press [OK].



5 Use [▲ / ▼] to select "ON", then press [OK].

e.g.) "Disc Full"



Your setting will be activated.









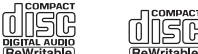

6 Press [SETUP] to exit.

INFORMATION ON PLAYBACK

Before you play back DVD, read the following information.

Playable Discs and Files

This unit is compatible to play back the following discs. To play back a DVD, make sure that it meets the requirements for region codes and color systems as described below. You can play back discs that have the following logos will play back on the unit. Other disc types are not guaranteed to play back.

Playable discs	Logos
DVD-video	
DVD+RW	
DVD-R	
DVD-R Double Layer	
DVD-RW (Finalized video mode discs only)	
DVD-R (Finalized video mode discs only)	
CD-DA (audio CD)	
video CD	
CD-RW	
CD-R	
Playable files	Media
CD-DA	
MP3	CD-RW/-R
Windows Media™ Audio	
JPEG	
DivX®	CD-RW/-R DVD+RW/+R DVD-RW/-R

 is a trademark of DVD Format/Logo Licensing Corporation.



DivX, DivX Certified, and associated logos are trademarks of DivX, Inc. and are used under license.

- Official DivX® Certified product; Plays DivX® 6.0, DivX® 5, DivX® 4, DivX® 3, and DivX®VOD video content (in compliance with DivX Certified™ technical requirements).
- Discs containing the DivX® files with the DivX® GMC (Global Motion Compensation) playback feature, which is DivX® supplemental function, cannot be played back on this unit.
- * This unit cannot play back the disc contents protected by Windows Media Digital Rights Management (DRM).

Unplayable Discs

The following discs will not play back on this unit.

- CD-ROM
- DVD-RAM
- DVD-ROM
- Unfinalized disc
- DVD contains MP3/Windows Media™ Audio/JPEG files
- DVD-R or DVD-RW recorded in VR mode or non compatible recording format

On the following disc, the sound may not be heard.

- Super audio CD - Only the sound on the CD layer can be heard. The sound on the high-density super audio CD layer cannot be heard.

Color Systems

DVD is recorded in different color systems throughout the world. The most common color system is NTSC (which is used primarily in the United States and Canada). This unit uses NTSC, so DVD you play back must be recorded in the NTSC system. You cannot play back DVD recorded in other color systems.

Region Codes

This unit has been designed to play back DVD with region 1. DVD must be labeled for ALL regions or for region 1 in order to play back on the unit. You cannot play back DVD that are labeled for other regions. Look for the symbols on the right on your DVD. If these region symbols do not appear on your DVD, you cannot play back the DVD in this unit.



The number inside the globe refers to region of the world.

A DVD labeled for a specific region can only play back on the unit with the same region code.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

INFORMATION ON PLAYBACK

PBC (playback control) for Video CD

You can select images or information on the menu screen by activating the PBC (playback control) function of the video CD.

This unit conforms to ver.1.1 and ver. 2.0 of video CD standard with PBC function.

Ver.1.1 (without PBC function): You can enjoy playback picture as well as music CD.

Ver.2.0 (with PBC function): While using a video CD with PBC function, "PBC" appears on the TV screen.

Note

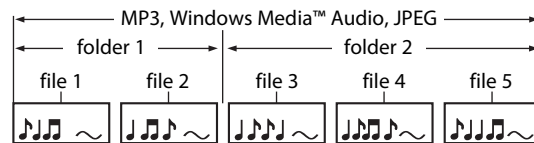
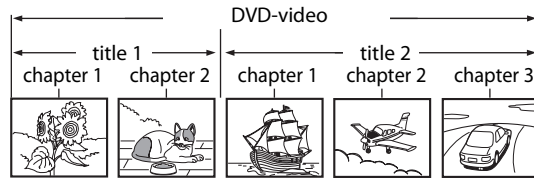
- PBC setting turns to "ON" when loading video CD with PBC function, thus, even after setting PBC to "OFF" and ejecting the video CD then reloading the video CD, this setting turns to "ON" automatically.
- Some operations cannot be performed while PBC function is on. Cancel PBC function temporarily to perform those operations by following the instruction below.

- 1) Press [SETUP].
- 2) Use [▲ / ▼] to select "CD Playback Mode", then press [OK].
"CD Playback Mode" menu will appear.
- 3) Use [▲ / ▼] to select "PBC (Video CD only)", then press [OK].
- 4) Use [▲ / ▼] to select "ON" or "OFF", then press [OK].
Your setting will be activated.

You can play back interactive software using menu screens. Refer to instructions in the video CD.

Hint for DVD Playback


The contents of DVD are generally divided into titles. Titles may be further subdivided into chapters.




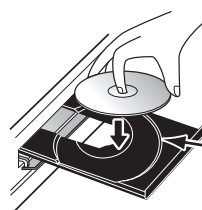
BASIC PLAYBACK

Direct Playback



1 Press [STANDBY-ON ].
Turn on the TV and be sure to select the input to which the unit is connected.

2 Press [OPEN/CLOSE ] to open the disc tray and insert your disc with its label facing up.





Align the disc to the disc tray guide.

* Make sure the disc is compatible with this unit.
(Refer to page 53 for the list of compatible discs.)

3 Press [OPEN/CLOSE ] to close the disc tray.

It may take a while to load the disc completely.

4 Press [PLAY ] to start playback.
If you are playing back a DVD-video or video CD with PBC function, a menu may appear.
Refer to "Using the Title / Disc Menu" on page 61.

5 Press [STOP ] once to stop playback temporarily.
• Refer to "Resume Playback" on page 62.

Note

- Some discs may start playback automatically.
- You can select images or information on the menu screen by activating PBC (playback control) function (page 54).

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup


Others

BASIC PLAYBACK

Playback from the Title List



1 Press [STANDBY-ON ].
Turn on the TV and be sure to select the input to which the unit is connected.


2 Press [OPEN/CLOSE ] to open the disc tray and insert your disc with its label facing up.




* Make sure the disc is compatible with this unit.
(Refer to page 53 for the list of compatible discs.)

3 Press [OPEN/CLOSE ] to close the disc tray.

It may take a while to load the disc completely.

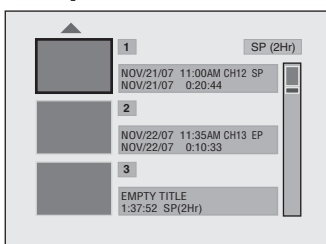
- To exit the title list, press [STOP ].
- To resume the title list, press [TITLE].

Note

- Some discs may start playback automatically.
- You can also start playback by pressing [PLAY ] instead of [OK] at step 4.

BASIC PLAYBACK

4 Use [▲ / ▼] to select a desired title, then press [OK].



- For Video CD, when "PBC (Video CD only)" in "CD playback Mode" menu is set to "ON", the video CD main menu will appear when inserting a disc. In such case, select a numbered menu with [the Number buttons].
- Press [▶] to display the next page, and press [◀] to display the previous page.

5 Use [▲ / ▼] to select "Play", then press [OK].



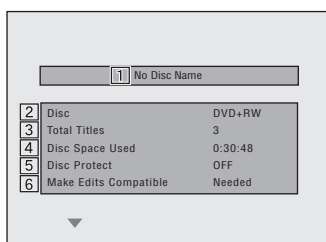
Playback will start.

6 Press [STOP ■] once to stop playback temporarily.

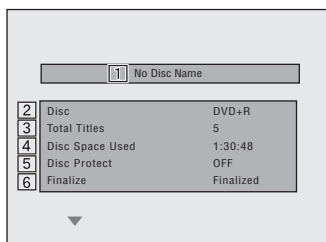
- Refer to "Resume Playback" on page 62.
- To eject the disc, press [OPEN/CLOSE ▲] to open the disc tray, then remove the disc before turning off the unit.

If you want to see disc information, press [◀] when the first page of the title list is displayed or press [▲] when the first title is selected but not when "Play", "Edit" or "Overwrite" is highlighted.

e.g.) DVD+RW



e.g.) DVD+R



1. Disc name
(Default "No Disc Name")
2. Disc type
(DVD+RW/DVD+R/ DVD-RW/DVD-R)
3. Total number of title
(include "EMPTY TITLE")
4. Total time of recorded disc space
5. Status of disc protection
(“ON” is protected disc.)
6. Making edits compatible/finalize
 - When DVD+RW is inserted:
If the disc needs to be set "Make Edits Compatible", "Needed" is displayed. Otherwise, "Not Needed" is displayed. (Refer to page 83.)
 - When DVD+R, DVD-RW or DVD-R is inserted:
If "Finalize" is done, "Finalized" is displayed. Otherwise, "Unfinalized" is displayed.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

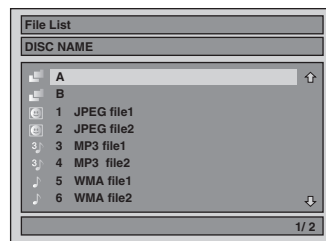
Others

BASIC PLAYBACK

Playing Back an Audio CD and a CD-RW/-R with MP3/Windows Media™ Audio/JPEG Files



3 Use [▲ / ▼] to select a desired folder or track/file, then press [OK].
e.g.) File list



When selecting track/file:

Playback will start.






When selecting the folder (Not available for audio CD):

The files in the folder will appear.

Use [▲ / ▼] to select the file or folder you want to play back, then press [OK].

- Press [PLAY ▶], [OK] or [▶] to move to any lower hierarchies.
- Press [◀] or [BACK ↶] to move back to the previous hierarchy.

Hints for audio CD tracks and MP3 / Windows Media™ Audio / JPEG files:

- Folders are shown by .
- Audio CD tracks are shown by .
- MP3 files are shown by .
- Windows Media™ Audio files are shown by .
- JPEG files are shown by .
- The system can recognize up to 255 folders, up to 99 tracks/999 files.
- Letters of a file/folder name overflowing the given space will be displayed as "...". Unrecognizable characters will be replaced with asterisks.
- If there are no files in the folder, "No Files" will be displayed.

It is recommended that files to be played back in this unit are recorded under the following specifications:

<MP3 / Windows Media™ Audio>

- Sampling frequency : 44.1 kHz or 48 kHz.
- Constant bit rate : 112 kbps - 320 kbps (MP3), 48 kbps - 192 kbps (Windows Media™ Audio).

<JPEG>

- Upper limit : 6,300 x 5,100 dots.
- Lower limit : 32 x 32 dots.
- File size of image maximum : 12 MB.

Note

- The audio source of MP3 files cannot be recorded as digital sound by an MD or DAT deck.
- Files whose extension is other than ".mp3(MP3)" ".wma(Windows Media™ Audio)" or ".jpg / .jpeg(JPEG)" will not be listed.
- Some unplayable folders or files may be listed due to the recording status.
- High-resolution JPEG files take longer to be displayed.
- Progressive JPEG files (JPEG files saved in progressive format) cannot be played back on this unit.

1 Follow steps 1 to 2 in "Direct Playback" on page 55.

2 Press [OPEN/CLOSE ▲] to close the disc tray.

It may take a while to load the disc completely.

When an audio CD is inserted, track list will appear.

When a CD-RW/-R with MP3/Windows Media™ Audio/JPEG files is inserted, file list will appear.

- To exit the track/file list, press [STOP ■].
- To resume the track/file list, press [TITLE].

BASIC PLAYBACK

Playing Back a DivX®



1 Follow steps 1 to 2 in “Direct Playback” on page 55.

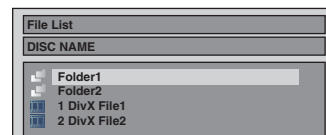
2 Press [OPEN/CLOSE ▲] to close the disc tray.

It may take a while to load the disc completely.

File list will appear automatically.

- To exit the file list, press [STOP ■].
- To resume the file list, press [TITLE].

3 Use [▲ / ▼] to select the desired folder or file, then press [OK].



When selecting file:
Playback will start.

When selecting folder:

The files in the folder will appear.

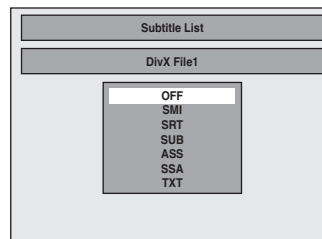
Use [▲ / ▼] to select the file you want to play back, then press [OK].

- Press [PLAY ►], [OK] or [▶] to move to any lower hierarchy.
- Press [◀] or [BACK ↶] to move back to the folder above.

To play back the DivX® subtitle created by the user...

The subtitle created by the user can be displayed during DivX® playback.

- 1) After selecting the DivX® file, the “Subtitle List” will appear when “DivX Subtitle” is set to anything other than “OFF”. (Refer to page 95.)
- 2) Use [▲ / ▼] to select the desired extension you want to display, then press [OK].



DivX® with the subtitle starts playback. The subtitle cannot be displayed when the setting is “OFF”.

- If there is more than one extension, the extension selection appears in the subtitle list.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

BASIC PLAYBACK

It is recommended that files to be played back in this unit are recorded under the following specifications:

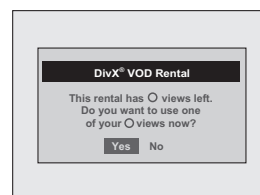
Official DivX® Certified product

- Playable codec of AVI files : DivX®3.x, DivX®4.x, DivX®5.x
- Maximum size of image : 720 x 480 @30 fps
720 x 576 @25 fps
- Sampling frequency of audio: 8 kHz - 48 kHz
- Audio type : MPEG1 audio layer 3(MP3),
MPEG1 audio layer 2,
Dolby Digital

Hint for the purchased or rental official DivX® Certified product

- When you purchased or rental a DivX® file through the official site of DivX® video which is called DivX® Video-On-Demand (VOD) services, a registration code is required every time you get the new file from the DivX® VOD services. Refer to "DivX® VOD" on page 95.

- Some DivX® VOD files are restricted with the limited playable times (you cannot play them back beyond the limit). If your DivX® VOD file has such limit, the playback confirmation screen will appear.




Use [◀/▶] to select "Yes" if you want to play back the file, or to select "No" if you do not wish to play it back. Then, press [OK] to confirm the selection.

- You cannot play back the DivX® VOD files, of which rental period has been expired. In such case, press [TITLE] and select other files that can be played back.



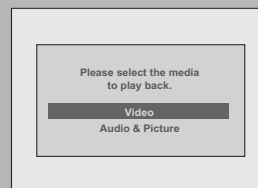
Note for DivX®

- DivX® is a codec (compression/decompression) that can compress images to a very small amount of data. The software can compress video data from almost any devices to the size that can be sent on the Internet without compromising visual quality of the images.
- A file with an extension of ".avi" and ".divx" is called an DivX® file. All files with the ".avi" extension are recognized as MPEG4.
- Files whose extension other than ".avi" and ".divx" will not be listed on the DivX® menu. However, unplayable folders and files may be displayed, depending on the recording conditions.
- Even if the file has an extension of either ".avi" and ".divx", this unit cannot play it back if it is recorded in the format other than DivX®.
- A symbol of  is shown on the top of the file name.
- A maximum of 255 folders or 999 files may be recognized in a disc.
- Up to 8 hierarchies can be recognized in a folder. Files in the 9th or deeper hierarchies cannot be played back.
- When there are 9 or more files, a down arrow "▼" appears, indicating that the user can view another part on the previous page. The current page number and the number of total pages are shown below the down arrow "▼".
- Letters of a file/folder name overflowing the given space will be displayed as "...". Unrecognizable characters will be replaced with asterisks.
- You can play back the disc recorded in multi-session.
- It may take a while for audio and images to be output after you inserted a disc and pressed [PLAY ▶].
- When playing back the files recorded in high bit rates, the images can be interrupted in some occasions.
- Although DivX® logo has been obtained for this unit, it may not be able to play back some data, depending on the characteristics, bit rates, or audio format settings, etc.
- A DivX® file whose file size exceeds 2 GB cannot be played back.
- If a large-sized DivX® file is selected, it may take a while to start the playback (over 20 seconds sometimes).
- If you try to playback the DivX® file that has the screen resolution which this unit does not support, the playback will be stopped and error message will appear.

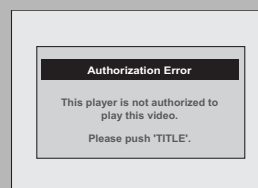
- If DivX® files written on a CD-RW/-R cannot be played back, rewrite them on a DVD+RW/+R or DVD-RW/-R and try to play back.

- For more information for DivX®, please visit <http://www.divx.com>.

- If you insert a CD-RW/-R with DivX® files that are mixed with MP3/Windows Media™ Audio/JPEG files, the playback media selection screen will be displayed. Please select "Video" and proceed to next step.



- Press [DISC MENU] to call up the playback media selection screen in stop mode.
- If you select "Audio & Picture", instead of "Video" on the playback media selection screen, this unit can play back MP3/Windows Media™ Audio/JPEG files.
- Some DivX® files cannot be played back on this unit due to the configuration and characteristics of the disc, or due to the condition of recording and authoring software.
- You cannot play back the DivX® VOD files obtained with different registration codes on this unit. Press [TITLE] and select other files that can be played back.



Note for DivX® Subtitle

- To utilize this function, the following conditions must meet.
 - "DivX Subtitle" must be activated in "DivX" menu. (Refer to "DivX Subtitle" on page 95.)
 - Playback file and the subtitle file must have the same name.
 - Playback file and the subtitle file must locate in the same folder.
 - Only the subtitle files with the following extensions are supported; .smi (.SMI), .srt (.SRT), .sub (.SUB), .ass (.ASS), .ssa (.SSA), .txt (.TXT). (.sub (.SUB) and .txt (.TXT) files may not be recognized.)
 - The subtitles that exceeds the playback time of the DivX® file will not be displayed.

BASIC PLAYBACK

Using the Title / Disc Menu



DVD or video CD with PBC function may contain a title list, which describes the contents of the disc, or a disc menu, which guides you through the available functions in the disc.

- 1) Press [TITLE] or [DISC MENU] to call up the title list or disc menu.
- 2) Use [▲ / ▼ / ◀ / ▶] to make a selection, and then press [OK] to enable your selection.
- 3) Press [STOP ■] to exit.

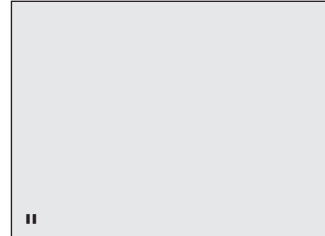
Note

- You can select a numbered menu with [the Number buttons] also.
- Menus vary among discs. Refer to the information accompanying the disc for details.
- [TITLE] or [DISC MENU] will not always be active with all DVD.
- For video CD, when "PBC (Video CD only)" in "CD Playback Mode" menu is "ON", the video CD main menu will appear when inserting a disc.

Pause

- 1) During playback, press [PAUSE II].

Playback will be paused and sound will be muted.



- 2) Press [PLAY ▶] to return to the normal playback.

Note

- On DVD, set "Still Mode" to "Field" in "Playback" menu if pictures in the pause mode are blurred. (Refer to page 90.)

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

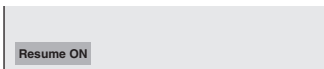
SPECIAL PLAYBACK

Resume Playback

You can play back from where you stopped playing back the disc last.

1) During playback, press [STOP ■].

The resume message will appear.



2) Press [PLAY ►].

In a few seconds, playback will resume from the point at which it stopped last. You can resume playback at the same point even if you turn off the unit.

To cancel the resume playback and start playing back the disc from the beginning, press [STOP ■] again while the playback is stopped.

Note

- For MP3/Windows Media™ Audio/JPEG files, playback will resume from the beginning of the file at which playback was stopped.
- Some video CD with the PBC function resume playback from the beginning of the track.

Fast Forward / Fast Reverse Playback



1) During playback, press [FFW ►►] or [REW ◀◀].

Every time you press [FFW ►►] or [REW ◀◀], approximate speed will be changed as follows. Fast forward or fast reverse playback across titles (for DVD) or files (for MP3 / Windows Media™ Audio files) is not possible.



For video CD, approximate forward/reverse speeds are 2x, 8x, 16x.

For audio CD, MP3/Windows Media™ Audio files, approximate speed is fixed at 8x with sound (indicated with ►►►► / ◀◀◀◀).

Picture quality of DivX® files in fast reverse is lower than that in fast forward.

For some DivX® files, fast forward/fast reverse may not function.

2) Press [PLAY ►] to return to the normal playback.

Note

- Forward/reverse speed will be indicated with icons as follows.

forward (approx. speed)

2x: ►►

20x: ►►►

40x: ►►►►

reverse (approx. speed)

5x: ◀◀

20x: ◀◀◀

40x: ◀◀◀◀

Skipping TV Commercials During Playback



You can skip TV commercials to enjoy the recorded programs without interrupting.

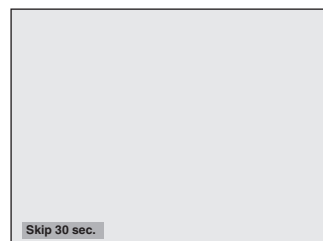
During playback, press [SKIP].

Normal playback will start at 30 seconds ahead from the point you press [SKIP].

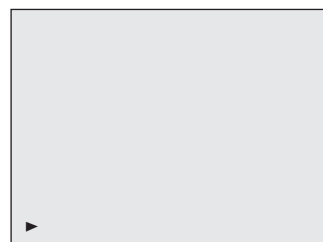
Every time you press [SKIP], the searching point will be extended by 30 seconds ahead.

You can press [SKIP] up to 6 times (180 seconds).

e.g.) Press [SKIP] once.



(forwarding 30 seconds)



Playback will return to the normal playback.

SPECIAL PLAYBACK

Rapid Playback



Rapid playback function is available only during playback.

This function is available only on discs recorded in the Dolby Digital format, and plays back in a slightly faster/slower speed while keeping the sound quality just as normal playback.

1) During playback, press [RAPID PLAY].

- ▶ : Press [RAPID PLAY] once during playback. Plays back approximately at 0.8 times of normal playback.
- ▶ : Press [RAPID PLAY] twice during playback. Plays back approximately at 1.3 times of normal playback.
- ▶ : Press [RAPID PLAY] 3 times to play back in normal speed. No effects.

2) Press [PLAY ►] to continue the normal playback.

Note

- Audio (language) setting cannot be changed while using this mode.
- This feature may not work at some point in a disc.
- Audio is PCM during rapid playback mode except when using digital audio connection.
- When using digital audio connection (COAXIAL or HDMI), the LPCM sound (2 channel) will be output.

Step by Step Playback



1) During playback, press [PAUSE II].

Playback will be paused and sound will be muted.

2) Press [NEXT ►] repeatedly.

Playback will advance one frame (or step) at a time when you press [NEXT ►] with the sound muted.

To play back step by step backward:

Press [PREV ◀] repeatedly.

Every time you press the button, the playback will go backward by one frame.

- Press and hold [PREV ◀] / [NEXT ►] to reverse/advance continuously.

3) Press [PLAY ►] to continue the normal playback.

Note

- Only step by step forward playback is available for playing back video CD and DivX® files.

Slow Forward / Slow Reverse Playback



1) During playback, press [PAUSE II]. Then press [FFW ►►] or [REW ◀◀].

Every time you press [FFW ►►] or [REW ◀◀], approximate speed will be changed as follows. (The sound will remain muted.)



To return to the normal playback, press [PLAY ►].

Note

- Forward/reverse speed will be indicated with icons as follows.
 - forward (approx. speed)
 - 1/16x:
 - 1/8x:
 - 1/3x:
 - reverse (approx. speed)
 - 1/16x:
 - 1/8x:
 - 1/4x:
- For some DivX® files, slow forward/slow reverse may not function.
- Only slow forward is available when playing back video CD and DivX® files.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

SPECIAL PLAYBACK

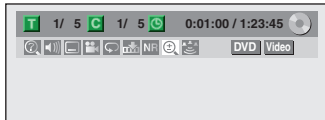
Zoom



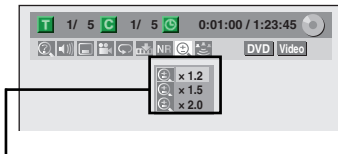
1) During playback, press [INFO] or [ZOOM].

2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲/▼] to select a desired zoom factor to zoom, then press [OK].



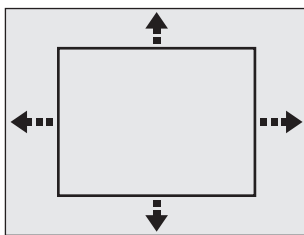
Zoom menu will appear.

There are four options

(x1.0, x1.2, x1.5 and x2.0), these are displayed excluding the current zoom rate.

Zoom area will be displayed.

4) Use [▲/▼/◀/▶] to select a desired zoom position, then press [OK].



Zoom playback will start.

Note

- When selecting a smaller factor than the current one, the zoom area will not be displayed.
- To exit the zoom menu, press [INFO] again at step 1.
- To cancel the zoom function, select "x1.0" using [▲/▼], then press [OK].
- You cannot slide the zoomed picture on some JPEG files.

Marker Setting

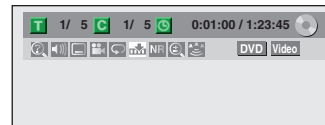


This feature allows you to assign a specific point on a disc to be called back later.

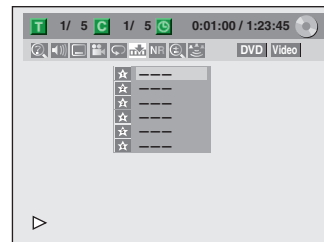
1) During playback, press [INFO].

2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the marker list.

e.g.) DVD-video



3) Use [▲/▼] to select a desired marker number. When it reaches the desired point, press [OK].



The title (track) number and the time will be displayed.

4) To return to the marker later:

Use [▲/▼] to select the desired marker number, then press [OK].

Note

- To clear a marker, select the marker number to be cleared, then press [CLEAR].
- All markers will be erased when you operate these operations listed below.
 - Opening the disc tray
 - Turning off the power
 - Record on a recordable disc
- You can mark up to 6 points.
- Marker setting is not available when you play back the video CD with PBC function.

SEARCH

Title / Chapter Search



Using [PREV ◀] / [NEXT ▶]

- 1) During playback, press [NEXT ▶] to skip the current title or chapter and move to the next.

The title or chapter will move forward by one at a time.
 • If there is no chapter in one title, the current title will be skipped.

To go back to the beginning of the current title or chapter, press [PREV ◀].

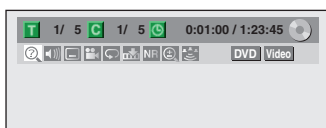
Press it repeatedly to go to the previous title or chapter. The title or chapter will move backward one at a time.

Using [INFO]

- 1) During playback, press [INFO].

- 2) Use [◀/▶] to select , then press [OK].

e.g.) DVD-video



The number next to **T** will be highlighted.

- 3) Title:

Use [▲ / ▼] or [the Number buttons] to enter a desired title number to search, then press [OK].
 Title search will start.

Chapter:

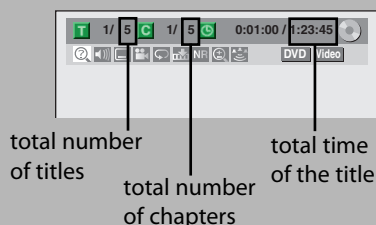
Press [▶] to move to the number next to **C** for chapter.

Use [▲ / ▼] or [the Number buttons] to enter a desired chapter number to search, then press [OK].

After the search, playback will start automatically.

Note

- In search mode display, total numbers of each search contents (title/chapter/time) are shown as a denominator.



Track Search



Using [PREV ◀] / [NEXT ▶]

- 1) During playback, press [NEXT ▶] to skip the current track/file and move to the next.

The track/file will move forward one at a time.

To go back to the beginning of the current track/file, press [PREV ◀].

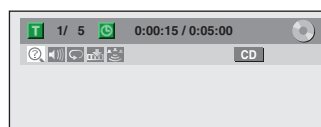
Press it repeatedly to go to the previous track/file. The track/file will move backward one at a time.

Using [INFO]

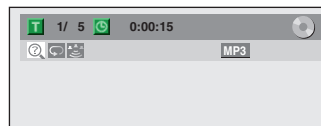
- 1) During playback, press [INFO].

- 2) Use [◀/▶] to select , then press [OK].

e.g.) audio CD



e.g.) MP3 files



The number next to **T** will be highlighted.

- 3) Use [▲ / ▼] or [the Number buttons] to enter a desired track/file number to search, then press [OK].

After the search, playback will start automatically.

Note

- During CD playback you can enter a track number directly using [the Number buttons] for track search without displaying the menu.
- Track search is not available when you play back the video CD with PBC function.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

SEARCH

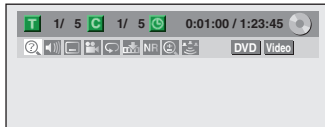
Time Search



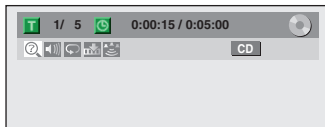
1) During playback, press [INFO].

2) Use [◀/▶] to select , then press [OK].


e.g.) DVD-video




e.g.) audio CD



The number next to **T** will be highlighted.

To move to the number next to , press [▶].

When time search is not available,  and time counter are not displayed.

3) Use [▲ / ▼ / ◀ / ▶] or [the Number buttons] to enter a desired time to search, then press [OK].

After the search, playback will start automatically.


Note

- Time search is available only in the same track, file or title.
- Time search is not available when you play back the video CD with PBC function.

REPEAT / RANDOM / PROGRAM PLAYBACK / SLIDE SHOW

Repeat Playback

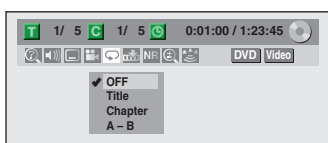
Available repeat function may vary depending the discs.

- 1) During playback press [INFO], then proceed to step 2), or press [REPEAT] then proceed to step 3).
- 2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the selection menu.

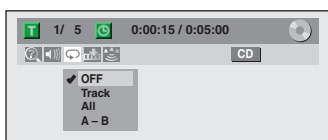


- 3) Use [▲ / ▼] to select a desired option to repeat, then press [OK].

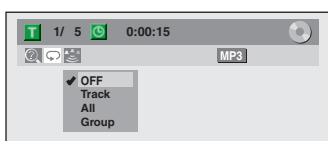
e.g.) DVD-video



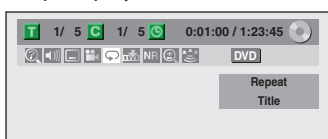
e.g.) audio CD, video CD



e.g.) MP3/Windows Media™ Audio/JPEG files



The selected repeat playback will start.



Title:

The current title will be played back repeatedly.

Chapter:

The current chapter will be played back repeatedly.

All:

The current disc will be played back repeatedly.

A-B:

Desired section can be played back repeatedly.

- 1) Use [▲ / ▼] to select "A-B", then press [OK].
- 2) Press [OK] at the desired starting point A.
- 3) Press [OK] at the desired ending point B.

Track:

The current track or file will be played back repeatedly.

Group:

The current folder will be played back repeatedly.

Note

- Point B for the repeat A-B playback should be set within the same title or track as point A.
- To cancel the repeat playback, select "OFF" at step 3. The repeat setting will also be canceled when you stop playback.
- You cannot select "Group" during the random playback of MP3/Windows Media™ Audio/JPEG files.
- For some DivX® files, A-B repeat playback may not function.
- Repeat playback is not available when you play back the video CD with PBC function.

Random Playback



You can play back a disc randomly instead of playing back in the original order.

- 1) Press [SETUP].
- 2) Use [▲ / ▼] to select "CD Playback Mode", then press [OK].
"CD Playback Mode" menu will appear.
- 3) Use [▲ / ▼] to select "Random Play", then press [OK].
Random playback will start.

Note

- To cancel random playback, press [STOP ■] twice during random playback. "OFF" appears on the TV screen.
- For video CD with PBC function, the PBC setting will be switched to off automatically when you start random playback.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

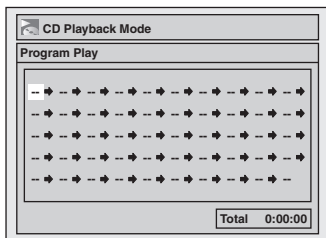
REPEAT / RANDOM / PROGRAM PLAYBACK / SLIDE SHOW

Program Playback



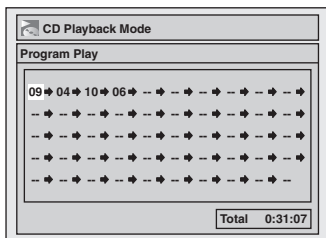
You can program the disc to play back in your desired order.

- 1) Press [SETUP].
- 2) Use [▲ / ▼] to select "CD Playback Mode", then press [OK].
"CD Playback Mode" menu will appear.
- 3) Use [▲ / ▼] to select "Program Play", then press [OK].
- 4) Use [▲ / ▼] to select a desired track, then press [OK] or [▶].



Repeat this step until you program all the desired tracks.

- 5) Press [PLAY ▶].



Program playback will start.

Note

- To erase tracks you selected, press [CLEAR] at step 4.
- You can make program settings up to 50 tracks.
- To cancel program playback, press [STOP ■] twice during program playback. "OFF" appears on the TV screen.
- You may also select a desired track using [the Number buttons] at step 4.
- For video CD with PBC function, the PBC setting will be switched to off automatically when you start program playback.

Slide Show



You can select the display time between 5 seconds and 10 seconds.

- 1) Follow steps 1 and 2 in "Random Playback" on page 67.
- 2) Use [▲ / ▼] to select "Slide Show", then press [OK].
- 3) Use [▲ / ▼] to select the display time, then press [OK].
- 4) Press [SETUP] to exit.

Note

- Large-size JPEG files take a few moments to be displayed.

SELECTING THE FORMAT OF AUDIO AND VIDEO

You can select the format of audio and video as you prefer depending on the contents of the disc you are playing back.

Switching Subtitles

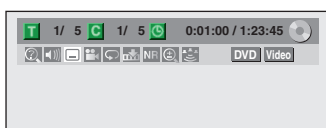


DVD-video may have subtitles in 1 or more languages. Available subtitle languages can be found on the disc case. You can switch subtitle languages anytime during playback.

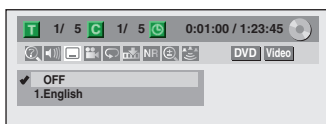
1) During playback, press [INFO].

2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the selection menu.

e.g.) DVD-video



3) Use [▲/▼] to select a desired subtitle language, then press [OK].



Subtitle will be displayed in the selected language. When selecting "OFF", subtitle will disappear.

Note

- Some discs will only allow you to change the subtitle from the disc menu. Press [TITLE] or [DISC MENU] to display the disc menu.
- If a 4-digit language code appears in the subtitle menu, refer to the "LANGUAGE CODE" on page 104.
- For disc with DivX® files, the TV screen only displays the number of subtitle languages and "____" next to the numbers.

Switching Audio Soundtrack



When playing back a DVD-video recorded with 2 or more soundtracks (these are often in different languages), you can switch them during playback.

When playing back video CD, audio CD you can switch "L/R"(stereo), "L"(left) or "R"(right).

1) During playback press [INFO], then proceed to step 2), or press [AUDIO] then proceed to step 3).

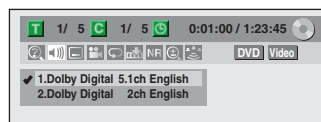
2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the selection menu.

3) Use [▲/▼] to select a desired audio soundtrack or audio channel, then press [OK].

For DVD-video, DivX® files

- Audio soundtrack will switch.

e.g.) DVD-video

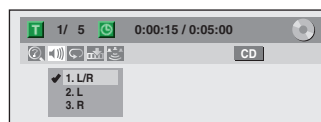


- If the title contains both main and sub audio, you can further select "L" (main), "R" (sub), or "L/R" (mixed of main and sub).

For audio CD, video CD

- Audio channel will switch.

e.g.) audio CD



Note

- Some discs will only allow you to change the soundtrack from the disc menu. Press [TITLE] or [DISC MENU] to display the disc menu.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup


Others

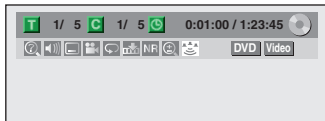
SELECTING THE FORMAT OF AUDIO AND VIDEO

Switching Virtual Surround System

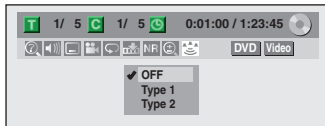


You can enjoy stereophonic virtual space through your existing 2 channel stereo system.

- 1) During playback, press [INFO].
- 2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the selection menu.
e.g.) DVD-video



- 3) Use [▲/▼] to select "OFF", "Type 1" or "Type 2", then press [OK].
e.g.) DVD-video



- OFF** : no effect
Type 1 : natural effect
Type 2 : emphasized effect


Note

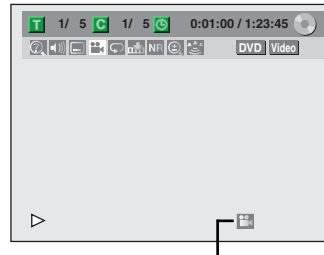
- Select "OFF" in a case sound is distorted.
- The setting will be kept even when the unit is turned off.

Switching Camera Angles



Some DVD-video have scenes shot from 2 or more angles. Angle information should be on the disc case if the disc contains multi-angle scenes.

- 1) During playback, press [INFO].
- 2) Use [◀/▶] to select , then press [OK].
e.g.) DVD-video



Angle icon appears when a switching camera angle is available.


Angle will switch each time you press [OK].

Note

- Angle icon does not appear on the TV screen in a case you set "Angle Icon" to "OFF" in "Playback" menu. Refer to page 90.

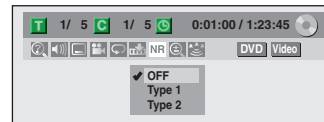
Reducing Block Noise



- 1) During playback, press [INFO].
- 2) Use [◀/▶] to select , then press [OK] within 1 second or wait for 1 second to display the selection menu.
e.g.) DVD-video



- 3) Use [▲/▼] to select a desired option, then press [OK].



Your setting will be activated.

This function reduces noise in the playback picture. If noises appear on the TV screen during playing back discs recorded in long time recording mode such as EP or SLP, select "Type 1" or "Type 2".

("Type 2" is more effective.)

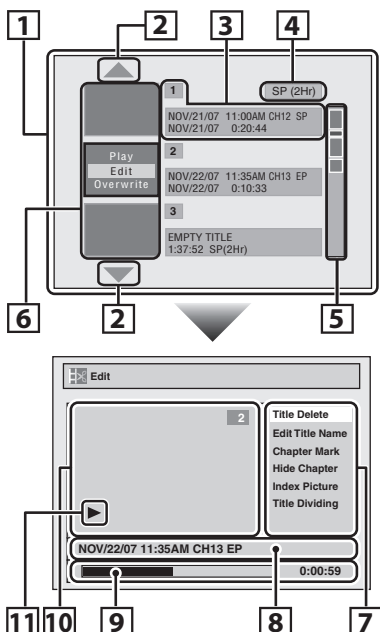
When playing back discs with a few noises such as DVD-video, select "OFF".

INFORMATION ON DISC EDITING

Guide to a Title List

Title list allows you to check the titles recorded on the disc easily. You can choose a title to play back from this list and easily edit the titles as you prefer.

Press [TITLE].



1. **Title list:** List of the titles recorded on the disc, and their information.
2. **Arrow:** Indicating there is a previous / next page.
3. **Title information:** On the first line, title name (editable) is displayed. On the second line, the length of the title is displayed.
Empty title: The portion of the disc where there is no recordings are made. As for the empty title, available recording time by the selected recording mode is displayed on the second line.
4. **Recording mode:** Currently selected recording mode is displayed here.
5. **Capacity indicator:** Indicating the position and the amount of each title in the disc. The portion for the selected title is highlighted.
6. **Thumbnails:** A cut from the recorded content is displayed here.
7. **Submenu:** Submenus for the selected menu are displayed here.
8. **Title name (editable):** If you do not name the title, the recorded date, time, channel, and the recording mode are displayed here.
9. **Progress bar:** Indicating the progress of the playback.
10. **Preview window:** Preview of the selected title is displayed here.
11. **Playback status:** Indicating the current playback status of the selected title.

Press [STOP ■] to exit the title list.

Editing Discs

You can edit discs for the following items. Be sure that once you edit titles, they will not remain as original.

- Deleting Titles (Refer to page 72.)
- Putting Names on Titles (Refer to page 73.)
- Setting Chapter Marks (Refer to page 74.)
- Clearing Chapter Marks (Refer to pages 75-76.)
- Hiding Chapters (Refer to page 77.)
- Setting Pictures for Thumbnails (Refer to page 78.)
- Dividing a Title (DVD+RW/DVD-RW only) (Refer to page 79.)
- Putting Name on Disc (Refer to page 80.)
- Setting or Releasing Disc Protect (Refer to page 81.)
- Erasing Disc (Refer to page 82.)
- Making Edits Compatible (Refer to page 83.)

Note

- When selecting "Edit" on pop-up menu of the title list and edit the title, the title list is displayed after writing the edited contents onto the disc.
- The capacity indicator in the right side of the title list may not indicate the precise capacity in the disc.
- The capacity indicator may not indicate the capacity for the titles of which recording time is short.
- Once you have finalized a DVD+R/ DVD-R, you cannot edit or record anything on that disc.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

EDITING DISCS

Deleting Titles

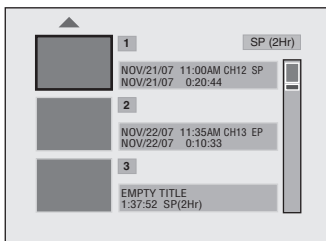
You can delete titles which you do not need anymore. Please be advised that the titles once deleted cannot be brought back to the disc.

For DVD+RW/DVD-RW, when the last recorded title in the title list is deleted, the available disc space to record on will be increased. For DVD+R/DVD-R, the disc space to record on will not be changed.



1 Press [TITLE].

2 Use [▲ / ▼] to select a desired title, then press [OK].



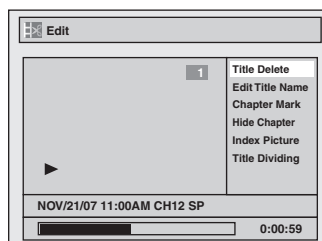
Note

- Deleted part of the titles in the capacity indicator changes in color.
- As for DVD+RW/DVD-RW if you delete the title, deleted title will be displayed as "EMPTY TITLE".

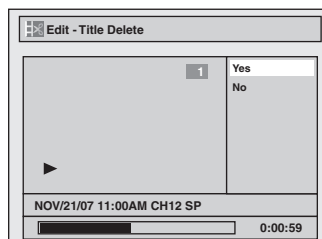
3 Use [▲ / ▼] to select "Edit", then press [OK].



4 Use [▲ / ▼] to select "Title Delete", then press [OK].



5 Use [▲ / ▼] to select "Yes", then press [OK].



After that, "Are you sure?" will appear, select "Yes" and then press [OK].

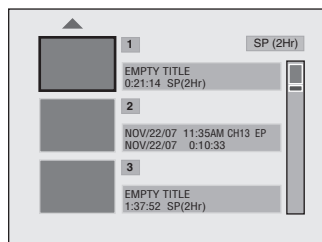
Title will be deleted.

Data will be written onto the disc momentarily.



This operation may take a while to be completed.

After editing is complete, the title list will appear. e.g.) DVD+RW/DVD-RW



EDITING DISCS

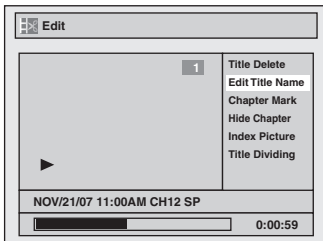
Putting Names on Titles

You can put title names on the titles and change the names from this menu.

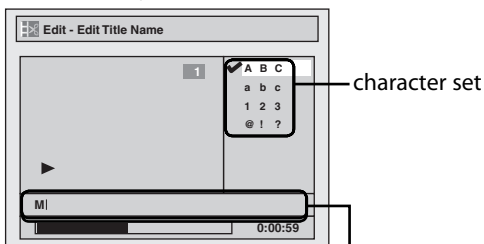


1 Follow steps 1 to 3 in “Deleting Titles” on page 72 to display “Edit” menu.

2 Use [▲ / ▼] to select “Edit Title Name”, then press [OK].

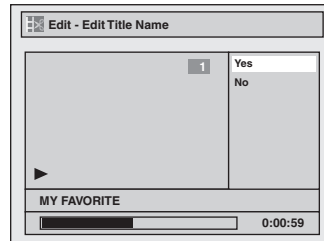


3 To enter a title name, follow the steps of “Guide to Edit Title Name” on this page.



area for entering title names
When you finish entering a title name, press [OK].

4 Use [▲ / ▼] to select “Yes”, then press [OK].



The name you entered will be activated for the title.

5 After this operation is completed, press [BACK ↵] to exit.
Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Guide to Edit Title Name

- Use [▲ / ▼] to select a desired character set, then press [OK].
- Follow the list below, use [the Number buttons] repeatedly until the desired letter appears.

Select Press	ABC	abc	123	@!?
[0]	<space>	<space>	0	<space>
[1]	(*1)	(*1)	1	!"#\$%&'()* *+,-./:;<=> ?@[]^_`{ }
[2]	ABC	abc	2	(*2)
[3]	DEF	def	3	(*2)
[4]	GHI	ghi	4	(*2)
[5]	JKL	jkl	5	(*2)
[6]	MNO	mno	6	(*2)
[7]	PQRS	pqrs	7	(*2)
[8]	TUV	tuv	8	(*2)
[9]	WXYZ	wxyz	9	(*2)

*1 Press [1], character set will be changed to the “@!?” mode automatically.

*2 Press [2] to [9], character set will be changed to the previous input mode automatically.

- To delete letters, press [CLEAR] repeatedly. Holding [CLEAR] to delete all letters.
- Use [◀ / ▶] to move the cursor to the left and right.
- You can enter up to 30 letters.

Note

- Undefined letters in a title name are shown by “*”. If you delete them, adjoining letters may change to “*” or other.

EDITING DISCS

Setting Chapter Marks

You can put chapter marks in each title. Once a chapter is marked, you can use it for the chapter search feature.

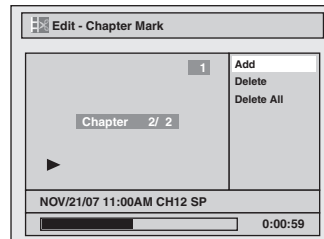


1 Follow steps 1 to 3 in “Deleting Titles” on page 72 to display “Edit” menu.

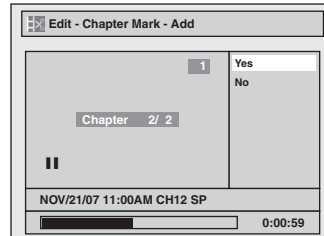
2 Use [▲ / ▼] to select “Chapter Mark”, then press [OK].
Submenu will appear.

3 Press [PLAY ►] and then [PAUSE ■] to decide the point at which you will create a new chapter mark.
• It is convenient to use [PREV ◀], [NEXT ▶], [REW ◀◀] and [FFW ▶▶] for finding the point to add a new chapter mark.

4 Use [▲ / ▼] to select “Add”, then press [OK].



5 Use [▲ / ▼] to select “Yes”, then press [OK].



A new chapter mark will be added.

6 Press [BACK ◀] twice to exit.
Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- When the number of chapter marks in a title is 99 and the number of chapter marks in a disc is 254, chapter marks cannot be added.
- Besides the above-mentioned, it is not likely to be able to add according to recorded time and number of chapters.
- Remaining time of the disc may decrease when adding chapter marks or increase when clearing chapter marks depending on the recording time or edited contents.

EDITING DISCS

Clearing Chapter Marks



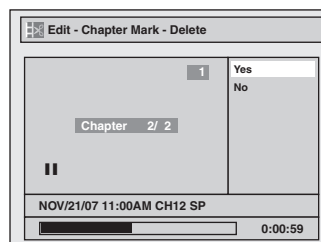
1 Follow steps 1 to 3 in “Deleting Titles” on page 72 to display “Edit” menu.

2 Use [▲ / ▼] to select “Chapter Mark”, then press [OK].
Submenu will appear.

3 Use [PREV ◀] / [NEXT ▶] to select a chapter mark to be deleted.

4 Use [▲ / ▼] to select “Delete”, then press [OK].

5 Use [▲ / ▼] to select “Yes”, then press [OK].



The selected chapter mark will be deleted.

6 Press [BACK ↵] twice to exit.
Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- Remaining time of the disc may decrease when adding chapter marks or increase when clearing chapter marks depending on the recording time or edited contents.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

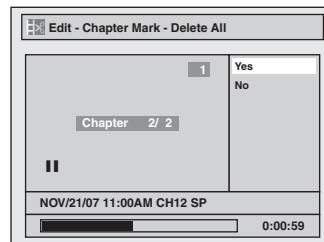
EDITING DISCS

Clearing Chapter Marks (cont'd)

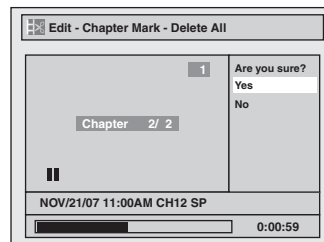


To delete all chapter marks:

- 1** Follow steps 1 to 3 in "Deleting Titles" on page 72 to display "Edit" menu.
- 2** Use [▲ / ▼] to select "Chapter Mark", then press [OK].
Submenu will appear.
- 3** Use [▲ / ▼] to select "Delete All", then press [OK].
- 4** Use [▲ / ▼] to select "Yes", then press [OK].



- 5** Use [▲ / ▼] to select "Yes", then press [OK].



All chapter marks will be deleted.

- 6** Press [BACK ↵] twice to exit.
Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- Remaining time of the disc may decrease when adding chapter marks or increase when clearing chapter marks depending on the recording time or edited contents.

EDITING DISCS

Hiding Chapters

You can hide chapters from the title list.
Hidden chapters are skipped during playback.

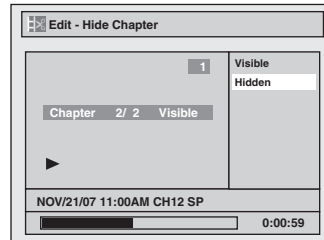


1 Follow steps 1 to 3 in “Deleting Titles” on page 72 to display “Edit” menu.

2 Use [▲ / ▼] to select “Hide Chapter”, then press [OK].
Submenu will appear.

3 Use [PREV ◀] / [NEXT ▶] to decide the chapter to be hidden.

4 Use [▲ / ▼] to select “Hidden”, then press [OK].



5 After this operation is completed, press [BACK ↵] twice to exit.
Data will be written onto the disc momentarily.

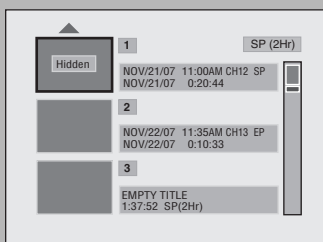
This operation may take a while to be completed.

If you want hidden chapters to be “Visible”, select the chapter to be shown. Then use [▲ / ▼] to select “Visible” at the step 4 on this page.

Data will be written onto the disc momentarily.
After that, title list is displayed.

Note

- “Hidden” will be displayed in the preview window while previewing the hidden chapter.
- When you make all chapters in the title “Hidden”, “Hidden” is displayed in a thumbnail of the title list.



Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

EDITING DISCS

Setting Pictures for Thumbnails

You can set your desired scene as a thumbnail for each title.

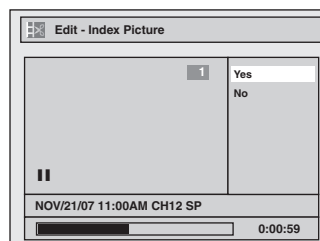


1 Follow steps 1 to 3 in “Deleting Titles” on page 72 to display “Edit” menu.

2 Use [PREV ◀], [NEXT ▶], [REW ◀◀], [FFW ▶▶], [PAUSE ||] and [PLAY ▶] to decide the picture you want to select as a thumbnail.

3 Use [▲ / ▼] to select “Index Picture”, then press [OK].

4 Use [▲ / ▼] to select “Yes”, then press [OK].



A picture for thumbnail will be set.

5 Press [BACK ↵] to exit.
Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- If the selected picture for a thumbnail is overwritten, the index picture is reset to the first scene of the title.

EDITING DISCS

Dividing a Title



You can divide one title into 2 new titles.

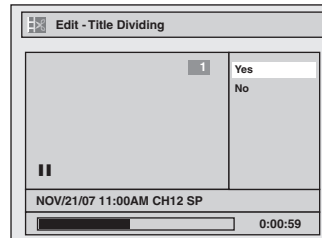


1 Follow steps 1 to 3 in “Deleting Titles” on page 72 to display “Edit” menu.

2 Use [PREV ◀], [NEXT ▶], [REW ◀◀], [FFW ▶▶], [PAUSE ||] and [PLAY ▶] to decide the point at which you will divide the title.

3 Use [▲ / ▼] to select “Title Dividing”, then press [OK].

4 Use [▲ / ▼] to select “Yes”, then press [OK].



The title will be divided into 2 new titles. Both title names are identical, and index pictures are reset to the first scene at this point.

Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- You cannot divide a title of the disc when the number of recording titles reaches the maximum of 49, and the number of recording chapters reaches the maximum of 254.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

EDITING DISCS

Putting Name on Disc

You can put a name on the disc and change it from this menu.

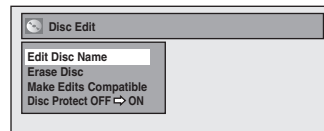
Press [STOP ■] if you are playing back a disc.



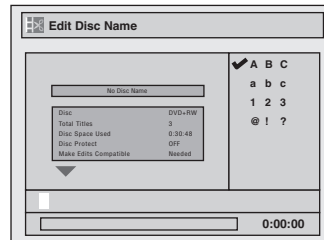
1 Press [SETUP].

2 Use [▲ / ▼] to select "Disc Edit", then press [OK].

3 Use [▲ / ▼] to select "Edit Disc Name", then press [OK].
e.g.) DVD+RW



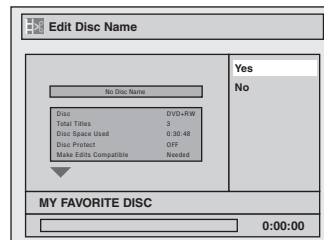
A window for entering a title name will appear.



4 To enter a disc name, follow the steps of "Guide to Edit Title Name" on page 73.

When you finish entering a title name, press [OK].

5 Use [▲ / ▼] to select "Yes", then press [OK].



The name you entered will be activated for the title. Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- You cannot select "Disc Edit" when finalized DVD+R or DVD-R is inserted.

EDITING DISCS

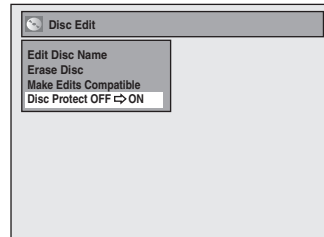
Setting or Releasing Disc Protect

To prevent accidental editing, or erasing the titles, you can protect them.



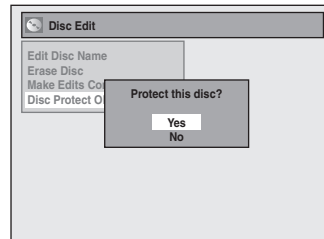
1 Follow steps 1 to 2 in "Putting Name on Disc" on page 80 to display "Disc Edit" menu.

2 Use [▲ / ▼] to select "Disc Protect OFF → ON", then press [OK].
e.g.) DVD+RW



- If the disc is already protected, "Disc Protect ON → OFF" will appear instead of "Disc Protect OFF → ON".

3 Use [▲ / ▼] to select "Yes", then press [OK].



Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

EDITING DISCS

Erasing Disc



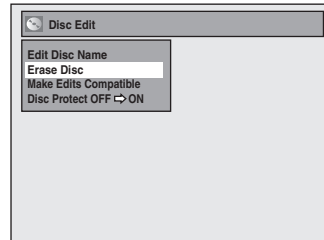
You can erase all titles on a disc.



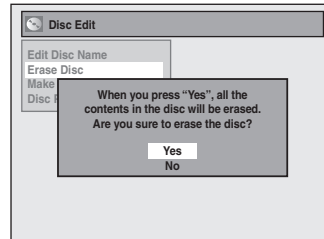
Press [STOP ■] if you are playing back a disc.

1 Follow steps 1 to 2 in "Putting Name on Disc" on page 80 to display "Disc Edit" menu.

2 Use [▲ / ▼] to select "Erase Disc", then press [OK].
e.g.) DVD+RW



3 Use [▲ / ▼] to select "Yes", then press [OK].



Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Note

- When you select "Yes" at step 3, all contents of the disc will be erased.

EDITING DISCS

Making Edits Compatible



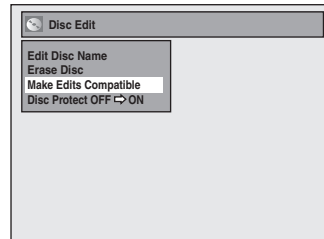
If you have added or deleted chapters, or made chapters hidden, you must perform "Make Edits Compatible" to see those effects on other unit.



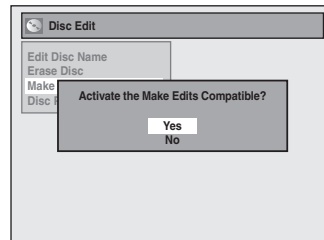
Press [STOP ■] if you are playing back a disc.

1 Follow steps 1 to 2 in "Putting Name on Disc" on page 80 to display "Disc Edit" menu.

2 Use [▲ / ▼] to select "Make Edits Compatible", then press [OK].



3 Use [▲ / ▼] to select "Yes", then press [OK].



Data will be written onto the disc momentarily.

This operation may take a while to be completed.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

LIST OF SETTINGS

The following table is the contents which you can set and the default setting.
Refer to the following table for useful operation.

Setup	Items (highlight is the default)		Contents		
General Setting	Playback → Pages 87-90	Parental Lock	OFF level 8 [Adult] to 1 [Kid Safe]	Set the parental level for DVD disc playback.	
		Disc Audio	Dynamic Range Control	ON OFF	Compressing the range of sound volume.
			PCM	48kHz 96kHz	Set whether the sound recorded in 96kHz will be down sampled in 48kHz.
			Dolby Digital	PCM Stream	Set the type of sound signal which outputs from the digital audio output jack.
		Disc Menu Language		English French Spanish Other	Set the language for disc menu language.
		Audio Language		Original English French Spanish Other	Set the language for audio.
		Subtitle Language		OFF English French Spanish Other	Set the language for subtitles.
		Angle Icon		ON OFF	Set whether or not to display the angle icon.
	Still Mode		Auto Field Frame	Set the type of still image in pausing playback.	
	Display → Pages 91-92	OSD Language		English Français Español	Set the language for OSD (on-screen display).
		Screen Saver		OFF 5minutes 10minutes 15minutes 30minutes	Set the idling time before the screen saver starts.
		FL Dimmer		Auto Bright Dark	Set the brightness of the front panel display.
		CC Style → Pages 32-34	DTV CC	OFF Service1 Service2 Service3 Service4 Service5 Service6	Set the type of the DTV closed caption.
			User Setting	ON OFF	Set the whether or not CC style setting is effective.
			Font Size	Middle Large Small	Set font size of the displayed caption.
Font Style			Style1 Style2 Style3 Style4 Style5 Style6 Style7 Style8	Set font style of the displayed caption.	

LIST OF SETTINGS

Setup	Items (highlight is the default)		Contents		
General Setting	Display → Pages 32-34	Edge Type	None Raised Depressed Uniform L.Shadow R.Shadow	Set edge type of the displayed caption.	
		Font Opacity	Solid Translucent Flash	Set the font opacity of the displayed caption.	
		Font Color	Transparent White Black Red Green Blue Yellow Magenta Cyan	Set the font color of the displayed caption.	
		Back Opacity	Solid Translucent Flash	Set back opacity of the displayed caption.	
		Back Color	Transparent White Black Red Green Blue Yellow Magenta Cyan	Set back color of the displayed caption.	
		V-Chip	Downloadable Rating Change Password	Set the downloadable rating.	
	Video → Pages 93-94	Progressive Scan		ON OFF	Set to the progressive scan mode (set to "ON") or to the interlace scan mode(set to "OFF").
		TV Aspect		4:3 Letter Box 4:3 Pan & Scan 16:9 Wide	Set a picture size according to aspect ratio of your TV.
		Video Input → Page 45	E1(Rear) E2(Front)	Video In S-Video In Video In S-Video In	Set the video input type for the external input.
	Recording	Auto Chapter → Page 36		OFF 5 minutes 10 minutes 15 minutes 30 minutes 60 minutes	Insert chapter marks at even time interval.
Auto Finalize → Page 52		Disc Full	ON OFF	Set the unit to finalize the disc automatically.	
		End of Timer Rec	ON OFF		
Make Recording Compatible → Page 36		ON OFF	Set to prohibiting additional recording (OFF) or to replace the title list after recording (ON).		
Clock → Pages 27-28	Clock Setting		OFF Auto Manual	Set the clock.	
	Auto Clock Setting		OFF Auto Manual	Set the clock automatically.	
	Daylight Saving Time		ON(MAR-NOV) ON(APR-OCT) OFF	Set the clock for the daylight saving time.	

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

LIST OF SETTINGS

Setup	Items (highlight is the default)	Contents		
General Setting	Channel → Pages 24-26	Auto Channel Preset	Antenna Cable (Analog) Cable (Analog/Digital)	Tune the channels automatically.
		Manual Channel Preset		Tune the channels manually.
		TV Audio Select → Pages 30-31	Stereo SAP	Set the analog TV audio type for output and recording.
	DivX → Page 95	DivX®VOD		Provide DivX®VOD registration code.
		DivX Subtitle	OFF English French Spanish German Italian Swedish Dutch Russian1 Russian2 Hungarian Polish Czech	Set the language for DivX® Subtitle.
	HDMI → Pages 96-97	Format	RGB YCbCr	Set the color space for the HDMI output.
		HDMI Audio	ON OFF	Set whether or not to output the HDMI audio signal.
		RGB Range	Normal Enhanced	Set the black-white contrast level for HDMI RGB output.
	Reset All → Page 98		Yes No	Set to the default setting.

Note

- Your change to each settings stays on even when the power is off.
- An item which is not currently available is grayed in the settings.

SETUPS

Playback

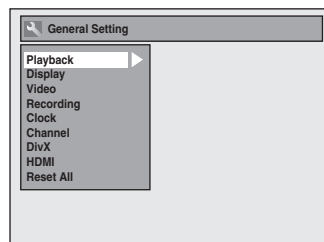


Press [STOP ■] if you are playing back a disc.

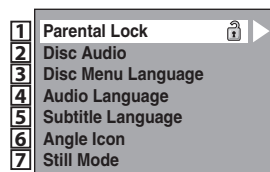
1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Playback", then press [OK].



3 Use [▲ / ▼] to select a desired item, then press [OK].



Submenu will appear.

4 Refer to **1** to **7** on pages 88-90 and set the selected item.

5 When you finish with setting, press [SETUP] to exit.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

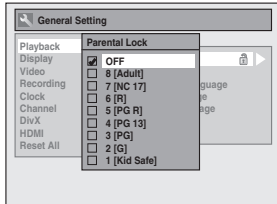
SETUPS

Playback (cont'd)

1 Parental Lock (Default: OFF)

Some DVD-video feature a parental lock level. Playback will stop if the ratings exceed the levels you set, it will require you to enter a password before the disc will playback. This feature prevents your children from viewing inappropriate material.

Use **[▲ / ▼]** to select the desired level, then press **[OK]**.



If a password has not been set yet, proceed to **A**.

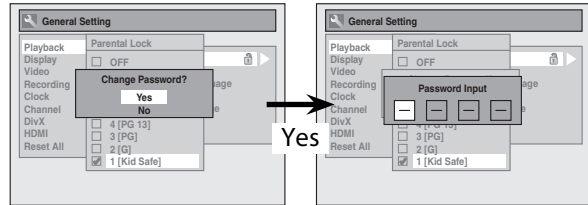
If a password has been set already, proceed to **B**.

Note

- Parental lock function may not be available to some discs.
- With some DVD, it may be difficult to find if they are compatible with parental lock. Be sure to check if the parental lock function operates in the way that you have set.
- Record the password in case you forget it.
- If there is a DVD in the unit when you set up the parental lock, press **[OPEN/CLOSE ▲]** to activate the parental lock level.

A A password has not been set yet.

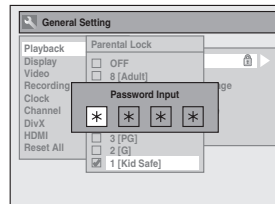
Use **[▲ / ▼]** to select "Yes". Use **[the Number buttons]** to enter a new password except for 4737, then press **[OK]**.



Your setting will be activated.

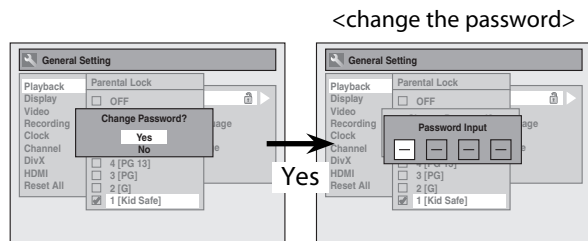
B A password has been set already.

• Use **[the Number buttons]** to enter the current password.



Your setting will be activated.

• If you want to change password, use **[▲ / ▼]** to select "Yes". Use **[the Number buttons]** to enter a new password, then press **[OK]**.



Your setting will be activated.

Note

- Press **[CLEAR]** to erase numbers entered incorrectly.
- When you forget the password or you want to clear all settings in "Parental Lock" menu, enter 4,7,3,7 using **[the Number buttons]** in password input window. Password will be cleared and parental levels will be set to "OFF".

SETUPS

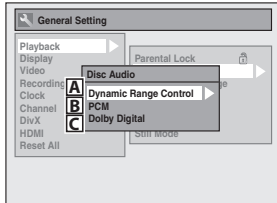
Playback (cont'd)

2 Disc Audio

Choose the appropriate audio setting for your external device.

It will only affect a disc playback.

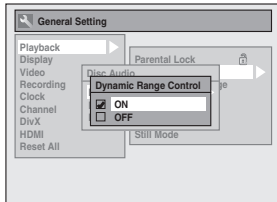
Use [▲ / ▼] to select a desired item, then press [OK].



A Dynamic Range Control (Default : ON)

Set to "ON" to compress the range between soft and loud sounds.

Use [▲ / ▼] to select a setting, then press [OK].



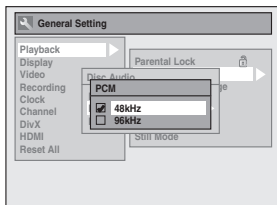
Your setting will be activated.

Note

- Dynamic range control function is available only on the discs which are recorded in the Dolby Digital format.

B PCM (Default : 48kHz)

Use [▲ / ▼] to select a setting, then press [OK].



Your setting will be activated.

48kHz : If your amplifier/decoder is NOT compatible with 96kHz PCM, select "48kHz". 96kHz sound will be output in 48kHz.

96kHz : If your amplifier/decoder is compatible with 96kHz PCM, select "96kHz". 96kHz sound will be output.

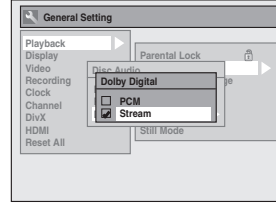
Note

When playing back disc with copyright protection

- Even if you select "96kHz", the sound will be down sampled at 48kHz.

C Dolby Digital (Default : Stream)

Use [▲ / ▼] to select a setting, then press [OK].



Your setting will be activated.

PCM : Converts the Dolby Digital into PCM (2 channel). When your amplifier/decoder is NOT compatible with Dolby Digital, set to "PCM".

Stream : Outputs Dolby Digital signals. When your amplifier/decoder is compatible with Dolby Digital, set to "Stream".

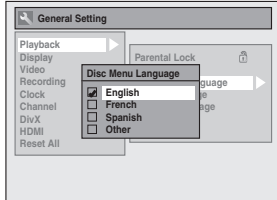
SETUPS

Playback (cont'd)

3 Disc Menu Language (Default : English)

Set the language for disc menu.

Use [▲ / ▼] to select a setting, then press [OK].

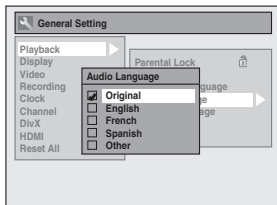


Your setting will be activated.

4 Audio Language (Default : Original)

Set the audio language.

Use [▲ / ▼] to select a setting, then press [OK].



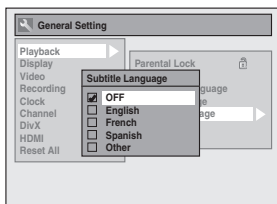
Your setting will be activated.

- When "Original" is selected, the audio language will be in the disc's default language.

5 Subtitle Language (Default : OFF)

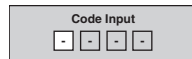
Set the subtitle language.

Use [▲ / ▼] to select a setting, then press [OK].



Your setting will be activated.

If "Other" is selected for **3** to **5**, press 4-digit code using [the Number buttons].



- When you finish entering the code, press [OK]. Refer to the language code table on page 104.

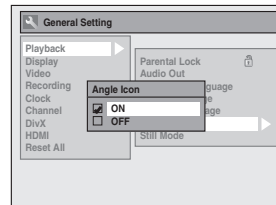
Note

- Only the languages supported by the disc can be selected.
- Audio language setting may not be available to some discs.
- You can change or switch off the subtitles on a DVD also from the disc menu if it is available.
- Press [CLEAR] or [◀] to erase numbers entered incorrectly.

6 Angle Icon (Default : ON)

Set to "ON" to show the angle icon during the playback.

Use [▲ / ▼] to select a setting, then press [OK].

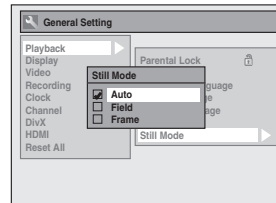


Your setting will be activated.

7 Still Mode (Default : Auto)

Select "Auto" usually.

Use [▲ / ▼] to select a setting, then press [OK].



Your setting will be activated.

Auto : Optimum resolution setting ("Field" or "Frame") will be selected.

Field : Images in the still mode will be stabilized.

Frame : Images in the still mode will be highly defined.

Note

- Frame is 1 completed video image made up of 2 fields (There are 30 frames per second of NTSC video).

SETUPS

Display



Press [STOP ■] if you are playing back a disc.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

2 Use [▲ / ▼] to select "Display", then press [OK].

3 Use [▲ / ▼] to select a desired item, then press [OK].



Selection menu will appear.

4 Refer to **1** to **5** on page 92 and set the selected item.

• For **4** refer to pages 32-34.

5 When you finish with setting, press [SETUP] to exit.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

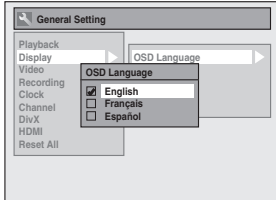
SETUPS

Display (cont'd)

1 OSD Language (Default : English)

Set the language for the on-screen display.

Use [▲ / ▼] to select a setting, then press [OK].

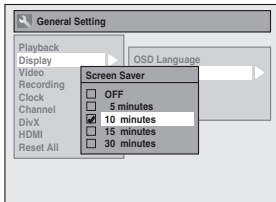


Your setting will be activated.

2 Screen Saver (Default : 10 minutes)

Set the time to activate the screen saver function on the TV screen.

Use [▲ / ▼] to select a setting, then press [OK].

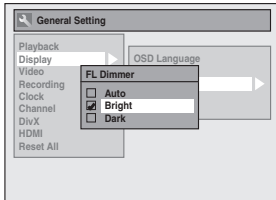


Your setting will be activated.

3 FL Dimmer (Default: Bright)

Set the front panel display brightness.

Use [▲ / ▼] to select a setting, then press [OK].



You can choose one from "Auto", "Bright" and "Dark". If "Auto" is selected, the display gets dark when the power is off.

5 V-Chip

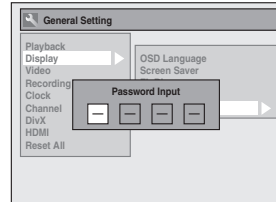
You can set the viewing limitation for the digital TV programs to prevent your children from watching inappropriate programs.

This feature is available only after the digital TV ratings have been downloaded.

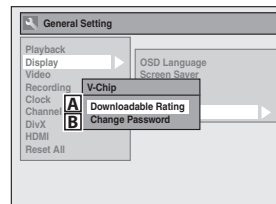
- The ratings can be downloaded by the unit automatically if it is available in your area.

1) Use [the Number buttons] to enter the access password.

If you have not set the password, first, use [the Number buttons] to set the access password, then press [OK]. The number you entered will be stored as the access password.



2) Use [▲ / ▼] to select a desired item, then press [OK].



A Downloadable Rating

Set the rating system via digital broadcasting, or clear the downloaded ratings.

If the broadcasting signal does not have the downloadable rating information, the message below will appear.

Downloadable Rating is currently not available.

- This message will also appear when you try to access "DOWNLOADABLE RATING" after you have cleared the downloadable rating information, and the new information has not been downloaded since.

To set the rating:

Use [▲ / ▼] to select "BLOCK SETTING" then press [OK] to show the various types of ratings. Use [▲ / ▼] to select a desired rating to set, then press [OK] to show the levels for the rating. Use [▲ / ▼] to select a level, then press [OK] to switch "VIEW" or "BLOCK". If you set one level to "BLOCK", all the higher levels will be turned to "BLOCK" automatically.

To clear the downloadable rating information and its setting:

Use [▲ / ▼] to select "CLEAR DOWNLOADABLE RATING", then press [OK].

B Change Password

Change the current password.

Use [the Number Buttons] to enter new access password.

Note

- When you forget the access password at step 1), enter 4,7,3,7 using [the Number buttons] in the password input window. Password will be cleared.
- Depending on the type of rating system, you may set the levels individually.

SETUPS

Video

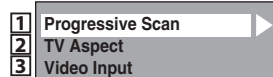


Press [STOP ■] if you are playing back a disc.

1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

2 Use [▲ / ▼] to select "Video", then press [OK].

3 Use [▲ / ▼] to select a desired item, then press [OK].



Submenu will appear.

4 Refer to **1** to **2** on page 94 and set the selected item.

• For **3** refer to page 45.

5 When you finish with setting, press [SETUP] to exit.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

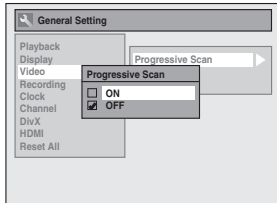
SETUPS

Video (cont'd)

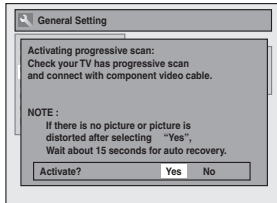
1 Progressive Scan (Default : OFF)

This unit is compatible with the progressive scan system. The feature provides you with the higher definition images than the traditional output system does. To utilize this feature, you must set progressive scan mode to "ON".

1) Use **[▲ / ▼]** to select "ON", then press **[OK]**.



2) Use **[◀ / ▶]** to select "Yes", then press **[OK]**.



3) Use **[▲ / ▼]** to select "Yes" within 15 seconds, then press **[OK]**.

Your setting will be activated.

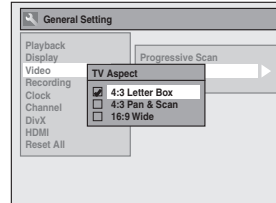
Note

- If your TV is compatible with progressive scan (525p / 480p), you are recommended to use the HDMI or component video cable (commercially available) to connect this unit to the TV. (Refer to "Method 3" or "Method 4" on pages 16 and 17.) If not, use the RCA video cable and set the progressive scan to "OFF" or press and hold **[SETUP]** for more than 3 seconds during DVD playback.
- When selecting "No" or not pressing any buttons on the unit or remote control within 15 seconds at step 3, progressive scan remains to be "OFF" (interlace scan).

2 TV Aspect (Default: 4:3 Letter Box)

You can select the TV aspect ratio to match the formats of what you are playing back with the unit and your TV screen (4:3 standard or 16:9 widescreen TV).

Use **[▲ / ▼]** to select a setting, then press **[OK]**.



If you have a standard TV:

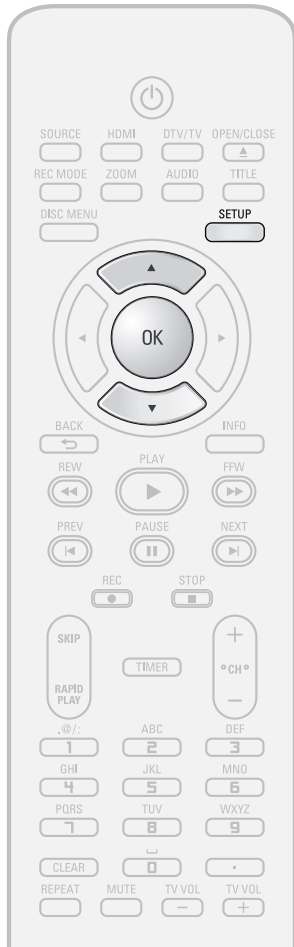
Select "4:3 Letter Box", so that black bars appear on the top and bottom of the TV screen when playing back a wide-screen picture. Select "4:3 Pan & Scan" for a full height picture with both sides trimmed when playing back wide-screen picture.

If you have a widescreen TV:

Select "16:9 Wide".

SETUPS

DivX®



1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

"General Setting" menu will appear.

2 Use [▲ / ▼] to select "DivX", then press [OK].

3 Use [▲ / ▼] to select a desired item, then press [OK].

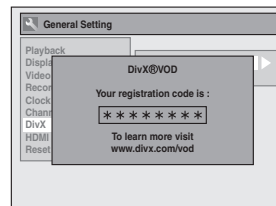


4 Refer to **1** and **2** on this page and set the selected item.

5 When you finish with setting, press [SETUP] to exit.

1 DivX® VOD

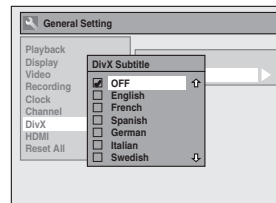
This unit allows you to play back the files purchased or rented from DivX® VOD (video-on-demand) services. The files are available on the internet. When you purchase or rent DivX® VOD files on the internet, you will be asked to enter an activation/registration code. This menu item provides you with the activation/registration code. On how to activate this unit for the DivX® VOD file playback, visit www.divx.com/vod.



2 DivX Subtitle (Default : OFF)

Set the DivX® subtitle.

Use [▲ / ▼] to select a setting, then press [OK].



Your setting will be activated.

Note

- Only the languages supported by the disc can be selected.
- Audio language setting may not be available to some discs.
- You can change or switch off the subtitles on a DVD also from the disc menu if it is available.
- One registration code is only valid for one DivX® VOD file.
- The registration code will be displayed in 8 characters which consist of numbers between 0 to 9 and capital letters chosen randomly.
- You must first download the file from the internet and play it back on this unit before you are able to get another code.
- You must follow this step every time you purchase or rent a DivX® VOD file from the internet.
- For more information for DivX®, please visit <http://www.divx.com/vod>.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

SETUPS

HDMI

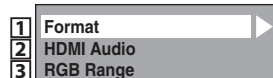


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

"General Setting" menu will appear.

2 Use [▲ / ▼] to select "HDMI", then press [OK].

3 Use [▲ / ▼] to select a desired item, then press [OK].



4 Refer to **1** to **3** on page 97 and set the selected item.

5 When you finish with setting, press [SETUP] to exit.

SETUPS

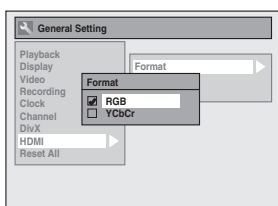
HDMI (cont'd)

1 Format (Default : RGB)

You can select the color space for HDMI output.
Set the appropriate color space for your display device.

Use [▲ / ▼] to select a setting, then press [OK].

- When the connected device is not compatible with the Y/Cb/Cr, HDMI signal is output as RGB regardless of the setting.



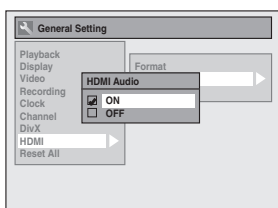
Your setting will be activated.

2 HDMI Audio (Default : ON)

If you do not want to output the audio through HDMI (when you digitally output the audio through the COAXIAL DIGITAL AUDIO OUTPUT jack to your audio system, etc.), you can set the HDMI audio output off.

Use [▲ / ▼] to select a setting, then press [OK].

- Set to "OFF" when not outputting the HDMI sound.



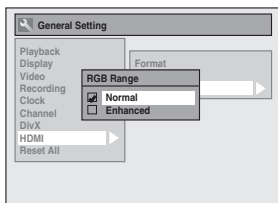
Your setting will be activated.

3 RGB Range (Default : Normal)

You can adjust the RGB range to make the dark areas of the HDMI images brighter.

Use [▲ / ▼] to select a setting, then press [OK].

- Select "Enhanced" if the black-white contrast is not clear.
- This setting is effective only for HDMI RGB output.



Your setting will be activated.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

SETUPS

Reset All

Reset the setting to default.

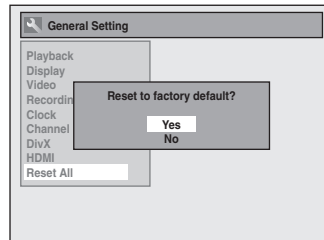


1 Press [SETUP] and use [▲ / ▼] to select "General Setting", then press [OK].

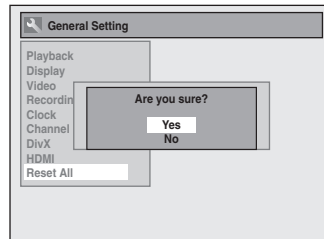
"General Setting" menu will appear.

2 Use [▲ / ▼] to select "Reset All", then press [OK].

3 Select "Yes" using [▲ / ▼], then press [OK].



4 Select "Yes" again using [▲ / ▼], then press [OK].



Your setting in recording will be initialized.

Note

- The settings listed below will remain unchanged even after resetting to the factory default.
 - OSD language setting
 - Channel setting
 - Clock setting
 - Parental lock setting
 - V-Chip setting
 - Timer programming information
 - DivX® registration code

TROUBLESHOOTING

Before requesting service for this unit, check the table below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

Symptom	Remedy
Power	
The power does not turn on.	<ul style="list-style-type: none"> • Check that the AC power cord is connected securely. • Check the breaker (in case of power failure).
Picture	
There is no picture.	<ul style="list-style-type: none"> • Re-connect the connecting cords securely. • Check if the connecting cords are damaged. • If the main menu appears on the TV screen, press [BACK ↵] to exit. • Check the connection to your TV (pages 16-18). • Check if the progressive scan mode is set correctly according to your TV (page 94). • Switch the input selector on your TV (such as to "E1") so that the signal from the unit appears on the TV screen.
Picture noise appears.	<ul style="list-style-type: none"> • Clean the disc with a cleaning cloth.
Playback picture from the external devices connected to this unit is distorted.	<ul style="list-style-type: none"> • If the picture output signal from the external devices passes through this unit to get to your TV, the copy protection signal applied to some DVD could affect the picture quality. Disconnect the playback device in question and connect it directly to your TV.
TV program reception does not fill the TV screen.	<ul style="list-style-type: none"> • Try to set the channels with "Auto Channel Preset" or "Manual Channel Preset" in "Channel" menu (pages 24-26). • Select a channel of any TV program using [CH + / -].
TV program pictures are distorted.	<ul style="list-style-type: none"> • Adjust TV antenna. • Adjust the picture. (Refer to the TV's manual.) • Place the unit and TV farther apart. • Place the TV and any bunched RF coaxial cables farther apart.
TV channels cannot be changed.	<ul style="list-style-type: none"> • Switch the input to TV. • Connect the RF coaxial cable correctly (pages 13-15).
Playback picture is distorted.	<ul style="list-style-type: none"> • Keep the device which may cause electrical disturbances, such as a cellular phone, away.
No analog TV closed captions are output.	<ul style="list-style-type: none"> • If you are using HDMI connection to watch the TV programs through this unit's tuner, analog TV closed caption cannot be output. Try using other connection.
Sound	
There is no sound.	<ul style="list-style-type: none"> • Clean the disc with a cleaning cloth. • Re-connect all connections securely. • Check if the connecting cord is damaged. • Check the connections to the amplifier input. • Check if the input device setting on the amplifier is correct. • When the unit is in pause mode or in slow-motion playback mode, sound is not output. This is not a malfunction. • When the unit is in fast forward or fast reverse mode, sound is not output. This is not a malfunction. • If you are using COAXIAL DIGITAL AUDIO OUTPUT jack, check the setting in "Disc Audio" (page 89).
Sound is noisy.	<ul style="list-style-type: none"> • Clean the disc with a cleaning cloth.
Remote control	
The remote control does not function.	<ul style="list-style-type: none"> • Batteries are weak. • There are obstacles between the remote control and the unit. • The remote control is far from the unit. • There are no batteries in the remote control. • Check if the unit is turned on. • Check if you are pointing the remote control at the recorder and NOT the TV. If you have a plasma TV, it may interfere with the IR signal. Try the remote with the plasma off. If the remote works, you may need to move the unit away from the plasma TV.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others



TROUBLESHOOTING

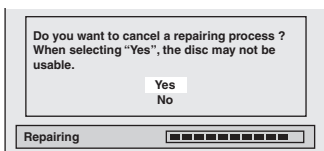
Symptom	Remedy
Playback The disc does not play back.	<ul style="list-style-type: none"> • No disc is inserted. • A blank disc is inserted. • The disc is upside down. Insert the disc with the labeled side facing up. • The disc is not correctly inserted. • The unit cannot play back certain discs (such as a CD-ROM) (page 53). • The region code on the DVD-video does not match the unit (page 53). • Moisture has condensed inside the unit. Remove the disc and leave the unit turned on for about 2 hours until the moisture evaporates (page 5). • If the disc was recorded on another recorder, the unit cannot play back the disc if it was not finalized.
Discs recorded on this unit cannot be played back on other DVD players.	<ul style="list-style-type: none"> • If you are using DVD+R, DVD-RW/-R disc, please ensure you finalized the disc after recording (page 51).
Playback image freezes for a second.	<ul style="list-style-type: none"> • During the playback of 2 layered disc, picture may freeze for a moment when the 1st layer switches to the 2nd layer. This is not a malfunction.
The disc does not start playback from the beginning.	<ul style="list-style-type: none"> • Resume playback was activated (page 62). Press [STOP ■] twice. • You have inserted a disc whose title menu or DVD menu automatically appears on the TV screen when it is first insert.
The unit starts playing back the disc automatically.	<ul style="list-style-type: none"> • The DVD-video features an auto playback function.
Some functions such as stop, search, or slow-motion playback cannot be performed.	<ul style="list-style-type: none"> • Depending on the disc, you may not be able to do some of the operations. Refer to the manual supplied with the disc.
The language for the sound track cannot be changed.	<ul style="list-style-type: none"> • The title does not have the multilingual audio tracks. • The DVD-video prohibits the changing of the language for the sound track.
The subtitle language cannot be changed or turned off.	<ul style="list-style-type: none"> • Multilingual subtitle are not recorded on the DVD-video.
The angles cannot be changed.	<ul style="list-style-type: none"> • Multi-angles are not recorded on the DVD-video being played back. • The angle-change operation is whenever possible as long as the disc contains a multi-angle portion. Actual change will be performed when the portion has come up. • The DVD-video prohibits changing angles. • Try changing the angle using the DVD-video's menu.
Recording / Timer recording / Editing The channel cannot be changed from the channel you are recording.	<ul style="list-style-type: none"> • Set the TV's input to "TV."
Nothing was recorded even though you set the timer setting correctly.	<ul style="list-style-type: none"> • There was a power failure during recording. • The unit's internal clock stopped due to a power failure that lasted for more than 30 seconds. Reset the clock (pages 27- 28). • The program contains copy protection signals that restricts copying. • The timer setting overlapped with another setting that has priority.
Recording does not stop immediately after you press [STOP ■] .	<ul style="list-style-type: none"> • It may take a few seconds for the unit to input disc data before recording stops.
Timer recording is not complete or did not start from the beginning.	<ul style="list-style-type: none"> • The timer setting overlapped with another setting that has priority (page 42). • Disc space was not enough.





TROUBLESHOOTING

Symptom	Remedy
DV	
DV signal cannot be input.	<ul style="list-style-type: none"> • Before connection, turn on the power supplies for both this unit and the DVC, and make sure that these units have stopped. • Only a "DVC-SD" signal can be input from the DVC to this unit. Other types of signals are not supported. • Do not connect any device other than the DVC. Even if a recorder or PC with another DV terminal is connected, the DV function will not operate. • If the DVC is not recognized after connection, turn off the power supply for the unit and re-connect the DVC.
The DVC cannot be operated with this unit.	<ul style="list-style-type: none"> • Signal input or DVC operation from this unit may be disabled depending on the type of DVC. • If a DVC signal cannot be input, use an external input (E1/E2) for analog connection via audio/video cables. • DVC control may be disabled depending on the type of DVC, even in a mode other than camera mode. In this case, switch to DVD control and execute the normal recording procedure while operating the DVC.
Certain functions of the unit cannot operate.	<ul style="list-style-type: none"> • Some functions may not operate depending on the type of DVC. For example, if the DVC does not support slow playback mode, the slow playback function is disabled. • With E3(DV-IN), the disc display menu does not appear unless disc playback is executed.
DV audio signal cannot be switched.	<ul style="list-style-type: none"> • For recording with the DVC, the recording audio signal can be set to 12 bits or 16 bits. However, when 16-bit recording mode is selected, audio signal cannot be switched. To record an audio signal, set it to 12 bits.
HDMI	
No image from HDMI connection.	<ul style="list-style-type: none"> • Check the HDMI connection. (Check the status of the HDMI related indications.) • Check whether the connected monitor device or other device supports HDCP. (This unit will not output a video signal unless the other device supports HDCP.) • Check the setting of HDMI. • Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.
There is no sound or the sound is distorted.	<ul style="list-style-type: none"> • The HDMI sound is not output when "HDMI Audio" is set to "OFF". • Check the RCA audio cable connection. If you are using HDMI-DVI conversion cable, you must connect the RCA audio cable, too. • Check whether the output format of this unit (HDMI FORMAT) matches the supported input format of other connected device.
Others	
The unit does not operate properly.	<ul style="list-style-type: none"> • When static electricity, etc., causes the unit to operate abnormally, unplug the unit and then plug it in again.
The disc tray does not open when you press [OPEN/CLOSE ▲].	<ul style="list-style-type: none"> • It may take a few seconds for the disc tray to open after you have recorded or edited a disc. This is because the unit is adding disc data to the disc.
"Repairing" appears on the TV screen.	<ul style="list-style-type: none"> • If there is a power failure or unplugging during recording, finalizing, formatting or editing (even after "Repairing" disappears), a repairing process will begin automatically just after turning the unit on again. It may take several minutes up to about several hours.
In a case you intend to cancel the repairing process.	<ul style="list-style-type: none"> • If you intend to cancel the repairing process, press [OPEN/CLOSE ▲] on the front panel, then select "Yes" and press [OK]. After that, press [OPEN/CLOSE ▲] to take out the disc. The disc canceled during the repairing process MAY NOT work.



Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others





TROUBLESHOOTING

Error message	Cause	Solution
Disc Error — Please eject the disc. — Playback feature may not be available on this Disc.	<ul style="list-style-type: none"> Unplayable disc is inserted in the unit. The disc is upside down. 	<ul style="list-style-type: none"> Insert the standardized disc which bear the marks on page 53. Insert the disc with the labeled side facing up.
Region Error — Please eject the disc. — Playback is not authorized in your region.	<ul style="list-style-type: none"> Playback is not authorized in the region of the DVD-video which you inserted in the unit. 	<ul style="list-style-type: none"> Insert the DVD-video with region codes 1 or ALL.
Parental Lock On The current selected parental level prohibits playback.	<ul style="list-style-type: none"> The current selected parental level prohibits playback. 	<ul style="list-style-type: none"> Check "Parental Lock" setting in "Playback" menu (page 88).
Recording Error This program is not allowed to be recorded.	<ul style="list-style-type: none"> The recording function encountered the copy prohibited program. 	<ul style="list-style-type: none"> You cannot record copy prohibited programs.
Recording Error This program is not recordable in +VR mode.	<ul style="list-style-type: none"> You are trying to record the copy-once program. 	<ul style="list-style-type: none"> You cannot record the copy-once program.
Recording Error Can not record on this disc.	<ul style="list-style-type: none"> You are trying to record onto the disc which is unrecordable, or the disc status is unable to record. The disc is dirty. The disc is damaged. 	<ul style="list-style-type: none"> Insert the recordable disc, and ensure the disc status satisfies the recording requirements (page 35). Clean the disc with a cleaning cloth. Replace the disc.
Recording Error This disc is protected and not recordable.	<ul style="list-style-type: none"> You are trying to record on to the protected disc which is set in "Disc Edit" menu. 	<ul style="list-style-type: none"> Release the disc protect setting in "Disc Edit" menu (page 81).
Recording Error Disc is full. (No area for new recording)	<ul style="list-style-type: none"> You are trying to record onto the disc which has no space for recording. 	<ul style="list-style-type: none"> Insert the recordable disc with enough recording space.
Recording Error You cannot record more than 49 titles on one disc. (The maximum is 49)	<ul style="list-style-type: none"> You are trying to record onto the disc on which the number of recording titles comes up to the maximum (49). 	<ul style="list-style-type: none"> Delete unnecessary titles (page 72).
Recording Error You cannot record more than 254 chapters on one disc. (The maximum is 254)	<ul style="list-style-type: none"> You are trying to record onto the DVD+RW or DVD-RW on which the number of recording chapters comes up to the maximum (254). 	<ul style="list-style-type: none"> Delete unnecessary chapter marks (pages 75-76).
Recording Error You cannot record on this disc as Power Calibration Area is full.	<ul style="list-style-type: none"> When recordings are performed repeatedly onto an unstable disc, this area may come up to be full. Every time you insert a disc for recording, the disc's working area will be taken up. And if you repeat this frequently, it will be used up sooner and you may not be able to record full 49 titles. 	<ul style="list-style-type: none"> Insert a new disc.
Recording Error This disc is already finalized.	<ul style="list-style-type: none"> You are trying to record onto the disc already finalized. 	<ul style="list-style-type: none"> Release the finalizing for this disc (page 51).
Recording Error The disc has no recording compatibility. Set "Make Recording Compatible" to "ON" to convert the disc.	<ul style="list-style-type: none"> You are trying to record onto the disc that had been recorded by other recorders. 	<ul style="list-style-type: none"> Set "Make Recording Compatible" to "ON" to rewrite the menu, after that you will record to disc (page 36).

* If you are still having trouble with the unit after checking "TROUBLESHOOTING", write down the error code and the error description for calling our help line mentioned on the front page to locate an Authorized Service Center.





TROUBLESHOOTING

Frequently Asked Questions

- | | |
|---|---|
| <ul style="list-style-type: none"> - Can I record to CD-RW/-R? | <p>No, this unit records only DVD.</p> |
| <ul style="list-style-type: none"> - Can I play back DVD-video that is bought in another country? | <p>Possible when the region code of the disc is 1 and All.</p> |
| <ul style="list-style-type: none"> - Can I connect the unit to my PC? | <p>No, you cannot control the unit by PC.</p> |
| <ul style="list-style-type: none"> - Can I program a timer recording with cable/satellite box? | <p>Yes, you can. Select "E1" or "E2" as your recording channel, and leave the cable / satellite box on (pages 15, 39-42).</p> |
| <ul style="list-style-type: none"> - Can I record one channel while watching another channel using a cable / satellite box? | <p>It depends on your connection configurations. For more details, please kindly contact your cable / satellite provider.</p> |
| <ul style="list-style-type: none"> - Can I connect this unit directly to a TV which only has an antenna in jack using an RF coaxial cable? | <p>No. You need an RF modulator (commercially available) to connect this unit to a TV which only has an antenna in jack (page 14). This unit does not have an RF modulator.</p> |
| <ul style="list-style-type: none"> - Can I change the channels on the cable / satellite box using the remote control of this unit? | <p>No. Changing the channels on the cable / satellite box using this unit's remote control is not possible. You need to use the remote control supplied with the cable / satellite box to change the channels on the cable / satellite box.</p> |

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others



LANGUAGE CODE

Language	Code
Abkhazian	4748
Afar	4747
Afrikaans	4752
Albanian	6563
Amharic	4759
Arabic	4764
Armenian	5471
Assamese	4765
Aymara	4771
Azerbaijani	4772
Bashkir	4847
Basque	5167
Bengali;Bangla	4860
Bhutani	5072
Bihari	4854
Bislama	4855
Breton	4864
Bulgarian	4853
Burmese	5971
Byelorussian	4851
Cambodian	5759
Catalan	4947
Chinese	7254
Corsican	4961
Croatian	5464
Czech	4965
Danish	5047
Dutch	6058
English	5160
Esperanto	5161
Estonian	5166
Faroese	5261
Fiji	5256
Finnish	5255
French	5264
Frisian	5271
Galician	5358
Georgian	5747
German	5051
Greek	5158
Greenlandic	5758
Guarani	5360
Gujarati	5367
Hausa	5447
Hebrew	5569
Hindi	5455

Language	Code
Hungarian	5467
Icelandic	5565
Indonesian	5560
Interlingua	5547
Interlingue	5551
Inupiak	5557
Irish	5347
Italian	5566
Japanese	5647
Javanese	5669
Kannada	5760
Kashmiri	5765
Kazakh	5757
Kinyarwanda	6469
Kirghiz	5771
Kirundi	6460
Korean	5761
Kurdish	5767
Laothian	5861
Latin	5847
Latvian; Lettish	5868
Lingala	5860
Lithuanian	5866
Macedonian	5957
Malagasy	5953
Malay	5965
Malayalam	5958
Maltese	5966
Maori	5955
Marathi	5964
Moldavian	5961
Mongolian	5960
Nauru	6047
Nepali	6051
Norwegian	6061
Occitan	6149
Oriya	6164
Oromo (Afan)	6159
Panjabi	6247
Pashto; Pushto	6265
Persian	5247
Polish	6258
Portuguese	6266
Quechua	6367
Rhaeto-Romance	6459
Romanian	6461

Language	Code
Russian	6467
Samoan	6559
Sangho	6553
Sanskrit	6547
Scots Gaelic	5350
Serbian	6564
Serbo-Croatian	6554
Sesotho	6566
Setswana	6660
Shona	6560
Sindhi	6550
Singhalese	6555
Siswat	6565
Slovak	6557
Slovenian	6558
Somali	6561
Spanish	5165
Sundanese	6567
Swahili	6569
Swedish	6568
Tagalog	6658
Tajik	6653
Tamil	6647
Tatar	6666
Telugu	6651
Thai	6654
Tibetan	4861
Tigrinya	6655
Tonga	6661
Tsonga	6665
Turkish	6664
Turkmen	6657
Twi	6669
Ukrainian	6757
Urdu	6764
Uzbek	6772
Vietnamese	6855
Volapuk	6861
Welsh	4971
Wolof	6961
Xhosa	7054
Yiddish	5655
Yoruba	7161
Zulu	7267

GLOSSARY

Analog Audio

An electrical signal that directly represents sound. Compare this to digital audio which can be an electrical signal, but is an indirect representation of sound. See also "Digital Audio".

Aspect Ratio

The width of a TV screen relative to its height. Conventional TVs are 4:3 (in other words, the TV screen is almost square); widescreen models are 16:9 (the TV screen is almost twice as wide as it is high).

Chapter

Just as a book is split up into several chapters, a title on a DVD is usually divided into chapters. See also "Title".

Component Video Output

Each signal of luminance (Y) and component (P_B/C_B, P_R/C_R) is independent to output so that you can experience picture color as it is. Also, due to compatibility with progressive video (525p/480p), you can experience higher-density picture than that in interlace (525i/480i).

Digital Audio

An indirect representation of sound by numbers. During recording, the sound is measured at discrete intervals (44,100 times a second for CD audio) by an analog-to-digital converter, generating a stream of numbers. On playback, a digital-to-analog converter generates an analog signal based on these numbers. See also "Sampling Frequency" and "Analog Audio".

DivX®

DivX® is a codec (compression/decompression) that can compress images to a very small amount of data.

Dolby Digital

The system to compress digital sound developed by Dolby Laboratories. It offers you sound of stereo(2ch) or multi channel audio.

Finalize

To make DVD, which have been recorded on, possible to play back in DVD players. With this unit, it is possible to finalize DVD+R, DVD-RW, and DVD-R.

HDMI (high definition multimedia interface)

A digital interface between audio and video source. It can transmit component video, audio, and control signal with one cable connection.

JPEG (joint photographic experts group)

JPEG is a method of compressing still image files. You can copy JPEG files on CD-RW/-R from a computer and play back the files on this unit.

MP3 (MPEG audio layer 3)

MP3 is a method of compressing files. You can copy MP3 files on CD-RW/-R from the computer and play back the files on this unit.

PBC (playback control) (video CD only)

This function enables you to play back interactive software using a menu screen. See also "Video CD".

PCM (pulse code modulation)

The most common system of encoding digital audio, found on CD and DAT. Excellent quality, but requires a lot of data compared to formats such as Dolby Digital and MPEG audio. For compatibility with digital audio recorders (CD, MD and DAT) and AV amplifiers with digital inputs, this unit can convert Dolby Digital and MPEG audio to PCM. See also "Digital Audio".

Progressive Scan (525p/480p)

A type of display that does not split each frame into fields, and instead scans directly through all the scanlines of each frame in order. Progressive scan provides less flickering and higher image resolution than traditional (525i/480i) TV signals. Refer to page 94 for instructions on selective progressive scan mode.

Region Code

Regions associate discs and players with particular areas of the world. This unit will only play back discs that have compatible region codes. You can find the region code of your unit by looking on the rear panel. Some discs are compatible with more than one region (or all regions).

Sampling Frequency

The rate which sound is measured by a specified interval to turn into digital audio data. The numbers of sampling in one second defines as sampling frequency. The higher the rate, the better the sound quality.

SAP (secondary audio program)

Sub-audio channel which is delivered separately from main-audio channel. This audio channel is used as an alternate in bilingual broadcasting.

S-Video Output

It delivers independently each signal of color(C) and luminance(Y) to TV as video signals, so that higher-quality picture will be gained.

Title (DVD only)

A collection of chapters on DVD. See also "Chapter".

Track

Audio CD use tracks to divide up the content of a disc. The DVD equivalent is called a chapter. See also "Chapter".

Video CD

A digital format for store video data in compact disc.

Windows Media™ Audio

Windows Media™ Audio is the audio compressing technology developed by Microsoft. You can copy Windows Media™ Audio files on CD-RW/-R from a computer and play them back on this unit.

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

SPECIFICATIONS

General

System	DVD+RW/+R, DVD-RW/-R, DVD-video, CD-DA, Video CD, CD-RW/-R
Power requirements	120V AC +/-10%, 60Hz +/-5%
Power consumption	22W (standby: 2.8W)
Dimensions (width x height x depth)	16.6 x 2.4 x 9.8 inches (420 x 59 x 247mm)
Weight	5.3 lbs. (2.4kg)
Operating temperature	41°F (5°C) to 104°F (40°C)
Operating humidity	Less than 80% (no condensation)
TV format	ATSC / NTSC-M TV standard

Recording

Recording format	+VR (video recording) format
Recording discs	DVD+Rewritable, DVD+Recordable DVD-Rewritable, DVD-Recordable (+VR mode only)

Video recording format

Sampling frequency	13.5 MHz
Compression format	MPEG

Audio recording format

Sampling frequency	48 kHz
Compression format	Dolby Digital

Tuner

Tuning system	Channel frequency synthesized tuning system
---------------	---

Channel coverage (ATSC / NTSC)

Terrestrial	VHF 2~13, UHF 14~69
CATV	2~13, A~W, W+1~W+94 (analog W+1~W+84), A-5~A1, 5A

Terminals

Front	Audio input RCA jack x 2	2V rms (input impedance: more than 22kΩ)			
	Video input RCA jack x 1	1Vp-p (75Ω)			
	S-video input Mini DIN 4-pin x 1	Y: 1Vp-p (75Ω)	C: 286mVp-p (75Ω)		
	DV input DV 4-pin jack x 1	IEEE 1394			
	VHF/UHF/CATV input and output F-type				75Ω unbalanced
Rear	Audio input RCA jack x 2	2V rms (input impedance: more than 22kΩ)			
	Audio output RCA jack x 2	2V rms (output impedance: more than 1kΩ)			
	Video input RCA jack x 1	1Vp-p (75Ω)			
	Video output RCA jack x 1	1Vp-p (75Ω)			
	S-video input Mini DIN 4-pin x 1	Y: 1Vp-p (75Ω)	C: 286mVp-p (75Ω)		
	S-video output Mini DIN 4-pin x 1	Y: 1Vp-p (75Ω)	C: 286mVp-p (75Ω)		
	Component video output RCA jack x 3	Y: 1Vp-p (75Ω)	PB/CB: 700mVp-p (75Ω)	PR/CR: 700mVp-p (75Ω)	
	Coaxial digital audio output RCA jack x 1	500mVp-p (75Ω)			
	HDMI output HDMI jack x 1	Video: 480p, 720p, 1080i, 1080p Audio: 2 channel linear PCM 32, 44.1 and 48kHz			

Note

- The specifications and design of this product are subject to change without notice.

LIMITED WARRANTY

PHILIPS LIMITED WARRANTY ONE (1) YEAR

WARRANTY COVERAGE:

PHILIPS warranty obligation is limited to the terms set forth below.

WHO IS COVERED:

Philips warrants the product to the original purchaser or the person receiving the product as a gift against defects in materials and workmanship as based on the date of original purchase ("Warranty Period") from an Authorized Dealer. The original sales receipt showing the product name and the purchase date from an authorized retailer is considered such proof.

WHAT IS COVERED:

The Philips warranty covers new products if a defect in material or workmanship occurs and a valid claim is received by Philips within the Warranty Period. At its option, Philips will either (1) repair the product at no charge, using new or refurbished replacement parts, or (2) exchange the product with a product that is new or which has been manufactured from new, or serviceable used parts and is at least functionally equivalent or most comparable to the original product in Philips current inventory, or (3) refund the original purchase price of the product. Philips warrants replacement products or parts provided under this warranty against defects in materials and workmanship from the date of the replacement or repair for ninety (90) days or for the remaining portion of the original product's warranty, whichever provides longer coverage for you. When a product or part is exchanged, any replacement item becomes your property and the replaced item becomes Philips' property. When a refund is given, your product becomes Philips' property.

Note: Any product sold and identified as refurbished or renewed carries a ninety (90) day limited warranty.

Replacement product can only be sent if all warranty requirements are met. Failure to follow all requirements can result in delay.

WHAT IS NOT COVERED - EXCLUSIONS AND LIMITATIONS:

This Limited Warranty applies only to the new products manufactured by or for Philips that can be identified by the trademark, trade name, or logo affixed to it. This Limited Warranty does not apply to any non-Philips hardware product or any software, even if packaged or sold with the product. Non-Philips manufacturers, suppliers, or publishers may provide a separate warranty for their own products packaged with the bundled product.

Philips is not liable for any damage to or loss of any programs, data, or other information stored on any media contained within the product, or any non-Philips product or part not covered by this warranty. Recovery or reinstallation of programs, data or other information is not covered under this Limited Warranty.

This warranty does not apply (a) to damage caused by accident, abuse, misuse, neglect, misapplication, or non-Philips product, (b) to damage caused by service performed by anyone other than Philips or Philips Authorized Service Location, (c) to a product or a part that has been modified without the written permission of

Philips, or (d) if any Philips serial number has been removed or defaced, or (e) product, accessories or consumables sold "AS IS" without warranty of any kind by including refurbished Philips product sold "AS IS" by some retailers.

This Limited Warranty does not cover:

- Shipping charges to return defective product to Philips.
- Labor charges for installation or setup of the product, adjustment of customer controls on the product, and installation or repair of antenna/signal source systems outside of the product.
- Product repair and/or part replacement because of improper installation or maintenance, connections to improper voltage supply, power line surge, lightning damage, retained images or screen markings resulting from viewing fixed stationary content for extended periods, product cosmetic appearance items due to normal wear and tear, unauthorized repair or other cause not within the control of Philips.
- Damage or claims for products not being available for use, or for lost data or lost software.
- Damage from mishandled shipments or transit accidents when returning product to Philips.
- A product that requires modification or adaptation to enable it to operate in any country other than the country for which it was designed, manufactured, approved and/or authorized, or repair of products damaged by these modifications.
- A product used for commercial or institutional purposes (including but not limited to rental purposes).
- Product lost in shipment and no signature verification receipt can be provided.
- Failure to operate per Owner's Manual.

TO OBTAIN ASSISTANCE IN THE U.S.A., PUERTO RICO, OR U.S. VIRGIN ISLANDS...

Contact Philips Customer Care Center at:
1-888-PHILIPS (1-888-744-5477)

TO OBTAIN ASSISTANCE IN CANADA...

1-800-661-6162 (French Speaking)
1-888-PHILIPS (1-888-744-5477) - (English or Spanish Speaking)

REPAIR OR REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY FOR THE CONSUMER. PHILIPS SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. EXCEPT TO THE EXTENT PROHIBITED BY APPLICABLE LAW, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ON THIS PRODUCT IS LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY.

Some states do not allow the exclusions or limitation of incidental or consequential damages, or allow limitations on how long an implied warranty lasts, so the above limitations or exclusions may not apply to you.

This warranty gives you specific legal rights. You may have other rights which vary from state/province to state/province.

Philips, P.O. Box 671539, Marietta, GA. 30006-0026

3121 233 48802

Introduction

Connections

Basic Setup

Recording

Playback

Editing

Function Setup

Others

EN 107



PHILIPS CONSUMER ELECTRONICS

A Division of Philips Electronics North America Corp
P.O. Box 671539 Marietta, GA30006 0026

Meet Philips at the Internet
<http://www.philips.com/welcome>



DVDR3506/37



Printed in China
JpnCN-0804/37-3
1VMN25013 *****
E7H42UD

